Robert S.
Thompson

Heber D. Thompson
Potterville Pa.

1889

HE
1045
G72
1880
NMAH

26.5.5

STATEMENT OF THE PRESENT CONDITION

OF

THE PHILADELPHIA & READING RAILROAD CO.

AND

The Philadelphia & Reading Coal and Iron Co.

WITH

PLAN FOR THEIR FINANCIAL RE-ORGANIZATION,

BY

MR. FRANKLIN B. GOWEN,

President of the Company.

PHILADELPHIA:

JACKSON BROS., PRINTERS, 400 AND 402 LIBRARY STREET.

1880.

STATEMENT OF THE PRESENT CONDITION
OF
THE PHILADELPHIA & READING RAILROAD CO.,
AND
THE PHILADELPHIA & READING COAL & IRON CO.,
WITH PLAN FOR THEIR FINANCIAL RE-ORGANIZATION.

By MR. FRANKLIN B. GOWEN,

President of the Company.

*To the Shareholders of the Philadelphia and Reading
Railroad Company:*

THE financial condition of the Philadelphia and Reading Railroad Company and the Philadelphia and Reading Coal and Iron Company, including the Receiverships of both companies, consolidated and treated as one, is shown by the tabular statement on the following pages.

Assets.

Railroads—equal 791 miles, single track, as per report of Chief Engineer, -	\$31,498,200 00
Real Estate of Railroad Company, including all depots, as per report of Chief Engineer, - - - -	14,316,994 00
Locomotive Engines and Cars, - -	11,534,710 88
Steam Colliers, Vessels and Barges, Stationary Engines, Machinery and Tools, Materials and Supplies, Equip- ments, &c., - - - - -	6,233,396 95
Stocks and Bonds, - - - - -	7,346,000 00
Current Business Debts due the Com- panies, - - - - -	3,911,768 76
Coal Lands of Coal & Iron Company, including all Improvements, estima- ted at \$750 per acre for Coal Land in addition to actual value of Im- provements on same, - - - -	75,600,000 00
Other Real Estate of Coal & Iron Com- pany, including Timber and Iron Ore Lands, - - - - -	2,200,000 00
Estimated present value of Leases held Railroad Company, covering 494 miles of Railroad, equal 888 miles, single track, after deducting suffi- cient amount to cover Losses from Canal Leases, - - - - -	7,500,000 00
Estimated value all other Assets, -	1,117,000 00
Total Assets, - - - -	<hr/> \$161,258,070 59

Liabilities.

Consolidated Mortgage and Prior Issues,	\$24,206,500	00
Improvement Mortgage, - - -	9,364,000	00
Divisional Coal Land Mortgages, -	12,638,000	00
Bonds and Mortgages on Real Estate,	2,807,703	91
General Mortgage and Perkiomen Scrip,	1,840,800	00
General Mortgage, - - - -	19,686,000	00
Income Mortgage, - - - -	2,454,000	00
Scrip convertible into Income Mortgage,	3,301,729	10
Convertible Bonds, - - - -	10,527,900	00
Open debenture Bonds, - - -	3,065,500	00
Debts of Leased Lines guaranteed to be paid at maturity, and on payment of which annual rentals are reduced equal to yearly interest on amount paid,	3,074,150	00
Floating debt and Receivers' certificates,	12,743,531	77
Unpaid overdue Coupons, Interest, and Dividends, - - - -	730,752	05
Current business obligations due for ac- cruing rentals, due to Connecting Rail- roads, due for wages and materials last month's business, and for Taxes,	3,450,971	62
Sinking Funds, Insurance Funds, &c., principally bookkeeping convenience accounts involving a liability in cash of less than \$100,000, - - -	1,150,955	21
	<hr/>	
	\$111,042,493	66
Preferred Stock, - \$1,551,800	00	
Common Stock, - 32,726,375	28	
	<hr/>	
	34,278,175	28
Total Liabilities, - - -	\$145,320,668	94
Balance—being surplus of property over debts and share capital, -	15,937,401	65
	<hr/>	
	\$161,258,070	59

The above shows a valuation of property of about \$50,000,000 in excess of all indebtedness, or about sixteen millions in excess of debt and share capital.

The liabilities are from the balance sheets of October 31st, and the statement of values are from careful appraisements by others, except the two items of coal lands and leased lines, which are my own estimates, but really far below actual values.

The fact that for some months past the North Pennsylvania and Bound Brook Railroad leases together have alone been earning monthly in excess of rental an amount exceeding the monthly interest upon \$7,500,000, and that with the constantly increasing local business and the through traffic of the Baltimore and Ohio Railroad Company, thrown upon the line since December 1st, those two leases alone may safely be considered worth to the Company, in actual earning power, from ten to fifteen millions of dollars, will probably satisfy the most skeptical that the sum of \$7,500,000 is a very moderate estimate of the value of the leased lines. The question of the correctness of the coal land valuation will be hereafter discussed in connection with a review of the report of Mr. Joseph S. Harris upon the same subject.

The total fixed charges of the two Companies for 1880 for interest of all kinds, including interest on the floating debt, but not including sinking funds, are - - - - - \$6,548,016 88

The total rentals due annually by the Company, including the guaranteed interest on obligations involving any cash outlay by the Company are - 3,424,213 00

Making total fixed charges for 1880, - \$9,972,229 88

The relief from previous payment by scrip for fixed charges for 1880 is	-	1,551,441 00
Balance payable in cash,	- - -	\$8,420,788 88
The net earnings of the two Companies from all sources of business (estimating the month of November) for fiscal year ending November 30th, are		8,785,586 00
Leaving cash surplus for the year,	-	\$364,797 12

In addition to the above surplus there has been some saving during the year, resulting from the Receivers having purchased a considerable amount of interest and having paid some rentals at less than the actual amounts due, but of which no account is taken in the above.

Upon the resumption of sinking funds next year, \$837,442 must be added to the total of fixed charges; the relief from scrip will be \$1,257,365 in 1881 and \$628,682 in 1882, after which full fixed charges must be paid.

In considering a plan for the extrication of the Company from financial difficulty, it is best to leave out of the question all temporary relief from scrip payments or suspension of sinking funds, and to deal with the total of fixed charges as they will be in 1883, when full payments, both for interest and sinking funds, must be made.

The total fixed charges will then be, including sinking funds and interest on present floating debt,	- - -	\$7,107,903 88
The total rentals, making allowance for increase of some rents in the interim, will be	- - - - -	3,549,213 00

Making a total of	-	-	-	-	\$10,657,116 88
to be earned to meet all charges, as					
against a profit for the present year					
of but	-	-	-	-	\$8,785,586 00

Showing that in 1883, if the earnings are no greater than they have been in 1880, there will be a deficiency of \$1,871,530.88 for fixed charges, or leaving out sinking funds, a deficiency of nearly \$1,000,000 for interest and rentals.

The estimate of the earnings of 1880, published in the last annual report, was based upon a coal tonnage for the Railroad of 9,000,000 tons, and an output from the mines worked by the Coal and Iron Company of nearly 5,000,000 tons, and had such tonnage and production been secured, the net result predicted for the year would have been obtained. The sudden collapse of the iron trade early in the year greatly prostrated the coal traffic, and reduced the output of coal: the tonnage of the Railroad Company being under 7,200,000, and the output of the Coal and Iron Company under 3,500,000. The expensive system of working all collieries three days out of the week (instead of working the best collieries full time, and letting the worst remain idle) which was adopted as the only plan by which harmony in the trade could be obtained, added at least thirty cents per ton to the cost of mining coal. So that even with an output of but 3,500,000 tons, had the best collieries been worked continuously to produce it, and the expensive collieries been suffered to remain idle, the profit of the Coal and Iron Company would have been over \$1,500,000, instead of \$503,956, due to the saving of expenses alone, and this profit would have been further increased several

hundred thousand dollars, from the fact that the best and most economically worked collieries produce a coal which nets a larger profit, as well from the higher price at which it sells, as from the lower cost at which it is produced.

The following table will show the actual results of 1880, compared with those estimated upon the larger tonnage above named :

	Estimate upon 9,000,000 Railroad coal tonnage, and 5,000,000 Coal and Iron Co. output.	Actual results upon Railroad tonnage of 7,200,000 and Coal and Iron Co. output of 3,450,000.
Coal transportation.....	\$12,150,000 00	\$8,331,136 00
Merchandise transportation.....	5,000,000 00	5,065,007 00
Passenger transportation.....	2,500,000 00	2,655,547 00
Miscellaneous receipts.....	150,000 00	79,430 00
For shipping coal.....	400,000 00	358,543 00
All expenses.....	\$20,200,000 00	\$16,489,663 00
Except interest on debt.....	11,500,000 00	11,632,246 00
	\$8,700 000 00	\$1 857,417 00
Coal and Iron Company.....	2,500,000 00	503,956 00
	\$10,200,000 00	\$5,361,373 00

The falling off in miscellaneous receipts for 1880, is due to the fact that the milk traffic of the Company, amounting to \$120,000, is included in merchandise receipts, while for six months of 1879 it was credited to miscellaneous receipts.

While it is believed that the earnings of the two Companies will never again be as low as they have for the year last past, and that in 1881, all fixed charges and full sinking funds can be earned with something towards a dividend; and that if, at present rates of trans-

portation and coal prices, a coal tonnage of 9,000,000 on the railroad, and an output of 5,000,000 tons from the mines of the Coal and Iron Company can be secured—at least ten per cent. upon the share capital of the Company can be made after payment of all present fixed charges; yet, in order to place the finances of the Company in sound condition, and the Company itself beyond all reach of future disaster, it is necessary first to pay the floating debt, and secure the return of the valuable collaterals pledged with it; and second, to reduce the fixed charges to such a reasonable limit as will practically guarantee dividends to the shareholders in the worst times through which the Company may have to pass.

First—with reference to the floating debt—

The total amount of this is	-	-	\$10,464,045	86
To which add Receiver's certificates				
and obligations,	-	-	2,279,485	91
To which should be added overdue and				
unpaid coupons, interest, &c.,	-	-	730,752	05
<hr/>				
Making a total of	-	-	\$13,474,283	82

The proper parties to furnish money to pay the floating debt are, undoubtedly, the shareholders; and it has been proposed by some to obtain the money from them either by an assessment upon the shares, or by a foreclosure and sale of the property of the Company under the general mortgage, coupled with an agreement, under which such of the junior creditors and stockholders as would pay a proper assessment could come into the new organization in the same relative position they now occupy, while those who could not, or who would not,

should be cut off from all ownership in their property. The first of these propositions is inadmissible, on account of the want of legal power to levy an assessment on shares which are already full-paid; and to the second I have always showed a determined opposition, not only because foreclosure would take from both companies their present valuable charters, but because the Company is not, and never has been, in such danger as to justify a resort to such an oppressive method as that which threatens to sell a man's property unless he complies with a demand to pay what he really does not owe, and what he may not have in his power to pay.—A much better, more honourable, and more satisfactory way is to ask from each shareholder some voluntary payment, offering the option to each, and giving to those who do subscribe an obligation which in times of prosperity will give them a great advantage over those who do not. Such a plan has been approved by the Managers of the Company and by the Receivers, and authorized by the Court. It involves the issue of a \$50 deferred-income bond for each share of stock in the Company, each shareholder to have the right of subscribing, at the rate of 30 per cent. or \$15 per bond of \$50, for one bond for every share of stock held by him, with the privilege to willing shareholders of subscribing for more than their quota, subject to allotment, in order to absorb the quotas of those who do not care to subscribe. These deferred-income bonds never become due, and there is no obligation on the part of the Company ever to pay the principal. They will, however, be entitled, only, however, after the common shares have had a six per cent. dividend, to any surplus of earnings up to six per cent., and thereafter they will

rank *pari passu* with the common shares for further dividend.

A syndicate has offered to deposit \$2,058,000, equal to \$3 upon each bond to be issued, as a guarantee that they will subscribe and pay for all of the issue which is not taken by the shareholders, provided they are paid a commission of five per cent. upon the net proceeds of the issue, \$10,290,000. The money for the guarantee fund is offered for deposit at any time—but since the date of the order of Court authorizing the issue some difficulty has been experienced in securing a proper agent in London to take charge of the matter in Europe, and, pending the difficulty, such assurances of the success of the scheme have been received as, in my opinion, would justify the Company in offering the bonds *pro rata* to the shareholders without the precaution of requiring, or the expense of paying for, any guarantee, thereby saving for the Company the commission of \$514,500. The cash proceeds of such issue would be \$10,290,000, to be applied to the payment of floating debt, leaving for Receivers' certificates, arrears of interest, &c., a debit balance of \$3,184,283.82, which could readily be paid out of the proceeds of the sale of \$5,000,000 unissued general mortgage bonds, or by the proceeds of an issue of part of the new loan hereinafter proposed.

This system of paying the floating debt at once reduces the fixed charges of the Company over \$600,000, and with the additional reduction that will result from the adoption of the new funding scheme, hereafter referred to, there can be but little doubt that dividends,

upon both common shares and deferred bonds, may before long be expected, from the general prosperity of the country and the increasing business of the Company; and when this point is reached the shareholders, who have subscribed for the deferred-income bonds, will have so great an advantage over those who do not that there can be but little doubt that all who properly examine the question, and can afford to do so, will become subscribers, while those who have been offered the option, and do not subscribe cannot complain, as their property will have been saved for them by the voluntary action of their associates, though its earning power will for some years be limited to six per cent. upon its par value. The following comparison will show the difference in favor of those who subscribe when the dividends are but six per cent. upon each class of securities.

SUBSCRIBER.			NON-SUBSCRIBER.		
Investment.	Income.	Per cent. of Dividend.	Investment.	Income.	Per cent. of Dividend.
1 share, \$50	\$3	6	1 share, \$50	\$3	6
1 bond, 15	3	20			
Total, \$65	\$6	9 $\frac{3}{13}$	\$50	\$3	6

Second.—To further reduce fixed charges. To accomplish this several plans have been suggested, principally affecting the general mortgage bonds, and the securities

below them. It has been proposed by some to scale the interest upon the general mortgage debt to 4 per cent., and to make all subsequent creditors accept fifty cents on the dollar. Others have suggested the issue of preferred income obligations for all securities below the general mortgage, so that if earned, full interest should be paid; while in bad years, if not earned, no fixed charges would become cumulative for any class of obligations below the general mortgage. Still another plan suggested is to give bonds bearing a low rate of interest for all junior obligations, with an additional bonus of common shares entitled to three per cent. dividends out of earnings. Of the above plans, all which are legal, and do not attempt to force an unwilling creditor to part with his obligations, are entitled to respect; yet, it seems to me that nearly all of them begin at the wrong end, by supposing it possible that the lowest class of obligations, so far as security is concerned, should be willing to accept the lowest rate of interest. Fortunately, the Company has it in its power to offer an undoubted first-class security, accompanied by a moderate rate of interest, to investors, and with the proceeds retire obligations and purchase guarantees bearing so much higher rates of interest, that the difference resulting from this system of exchange, together with the saving of sinking fund charges, will alone give all the relief required to place the Company upon a firm financial basis and guarantee dividends to its shareholders.

The annexed carefully-prepared table, which includes the \$5,000,000 of unissued general mortgage bonds, will show the present funded debt of the two companies, the

capital upon which rentals of leased lines is paid, and the amount of such guarantees of the Company as involve an annual cash outlay by the guarantor, together with the annual interest and rentals payable, and the rate which such annual payments bear, first to the par of the principal, and second, to its present market value.

Name.	OBLIGATIONS.		Annual charge	Rate per cent. of annual charge upon par amt.	Rate per cent. of annual charge upon market value.
	Amount at par.	Present market value.			
No. 1.—Consolidated and prior loans.....	\$24,206,500	\$30,500,190	\$1,580,800	6.5	5.2
No. 2. {	Improvement mortgage loan.....	\$9,364,000	\$561,840	6.	6.
	Divisional coal land bonds.....	12,969,000	905,900	7.	8.8
	Real estate, bonds and ground-rents Philada. & Reading R. R. Co....	1,916,252	1,916,252	6.	6.
	Real estate, bonds, and ground-rents Coal and Iron Co.....	716,556	48,018	6.7	6.7
	General mortgage scrip.....	1,741,620	1,393,296	6.	7.5
	General mortgage loan.....	24,696,000	1,481,760	6.	6.9
	Total No. 2.	\$51,403,428	\$3,216,990	6.3	7.2
Totals Nos. 1 & 2.....	\$75,609,928	\$75,405,904	\$4,797,790	6.3	6.4
No. 3. {	Income mortgage loan.....	\$2,454,000	\$171,780	7.	9.6
	Scrip, convertible into above.....	3,400,909	2,055,422	6.	9.9
	Convertible open debenture loans.....	10,527,900	5,263,950	7.	14.
	Open debenture loan Philadelphia & Reading Railroad Co.....	1,334,500	547,145	5.5	13.4
	Open debenture loan Coal and Iron Co.....	1,731,000	121,170	7.	23.5
Total No. 3.....	\$19,448,309	\$10,177,237	\$1,307,410	6.7	12.8

No. 4.	Mine Hill & Schuylkill Haven Railroad Co.....	\$4,022,500	\$4,505,200	\$321,800	8.	7.1
	Mount Carbon & Port Carbon Railroad Co.....	282,350	338,820	36,250	12.8	10.7
	Mill Creek & Mine Hill Railroad Co.....	323,375	362,180	33,000	10.2	9.1
	Schuylkill Valley Railroad Co.....	573,050	403,235	29,450	5.1	7.3
	Little Schuylkill & East Mahanoy Railroad Co.....	3,506,650	3,506,650	213,280	6.1	6.1
	East Pennsylvania Railroad Co.....	2,205,450	2,005,785	138,650	6.3	6.9
	Philadelphia, Germantown, and Norristown Railroad Co.....	2,240,900	4,718,490	277,623	12.4	5.9
	Chestnut Hill Railroad Co.....	120,650	243,713	16,478	13.6	6.8
	North Pennsylvania Railroad Co.....	11,547,789	12,832,758	754,145	6.5	5.9
	Delaware and Bound Brook Railroad Co.....	3,386,799	3,641,799	224,207	6.6	6.4
Total No. 4.....		\$28,218,513	\$32,558,630	\$2,044,883	7.2	6.3
No. 5.	Catawissa Railroad Co.....	\$6,161,850	\$5,351,987	\$365,235	5.9	6.8
	Schuylkill Navigation Co.....	12,736,588	7,660,880	635,776	5.	8.3
	Susquehanna Canal Co.....	5,029,396	2,392,665	243,488	4.8	10.2
	Chester Valley Railroad Co.....	500,000	200,000	30,000	6.	15.
	Colebrookdale Railroad Co.....	600,000	300,000	36,000	6.	12.
	Pickering Valley Railroad Co.....	332,300	132,920	23,261	7.	17.5
	Schuylkill Iron Co.....	12,000	12,000	840	7.	7.
	Danville Iron Co.....	39,000	19,500	2,730	7.	14.
	Philadelphia, Newtown, & New York Railroad Co.....	700,000	420,000	42,000	6.	10.
	Total No. 5.....	\$26,111,134	\$16,489,952	\$1,379,330	5.3	8.4
Grand Total.....		\$149,387,884	\$134,631,723	\$9,529,413	6.4	7.1

For convenience the above table may be condensed as follows:

Character of obligation.	Amount at par.	Amount at market value.	Annual charge.	Rate per cent. upon par amount.	Rate per cent. upon market value.
p. 1.—Consolidated Mortgage and prior issues.....	\$24,206,500	\$30,500,190	\$1,580,800	6.5	5.2
p. 2.—Obligations after Consolidated and before Income Mortgages.....	51,403,428	44,905,714	3,216,990	6.3	7.2
p. 3.—All obligations subsequent to General Mortgage..	19,448,309	10,177,237	1,307,410	6.7	12.8
p. 4.—Best Group of Leased Lines.....	28,218,513	32,558,630	2,044,883	7.2	6.3
p. 5.—Second Group of Leased Lines.....	26,111,134	16,489,952	1,379,330	5.3	8.4
Total.....	\$149,387,884	\$134,631,723	\$9,529,413	6.4	7.1

I have to propose that a new mortgage upon all the property of both Companies be made, securing an issue of five per cent. obligations, without sinking funds or foreclosure clauses, which issue should be divided into two classes, A and B, the former having priority of lien and interest charge over the latter. Class A to be for \$75,000,000, to retire Nos. 1 and 2, in above condensed table; Class B to be for \$75,000,000, to retire No. 3, and to purchase from time to time Nos. 4 and 5. All securities included in Nos. 4 and 5, when purchased, to be held by the Trustees of the mortgage as additional security therefor, with proper provisions for the income of all, and voting power of share capital of leased lines being received and held by the Company. Class A should be either perpetual, or 50-year obligations, with provision in the mortgage for renewal at expiration of 50 years; the interest on Class A to be cumulative, and subject to be collected by legal proceedings upon any default. The bonds of Class B should be perpetual, and while the interest should also be cumulative, for the protection of the market value of Class A, it should be provided that no suit could be brought to recover interest until three years after default had been made. There can never be any doubt that the Company that has earned nearly \$9,000,000 in 1880, will always be able to earn the \$3,750,000 interest upon Class A; and as in America three years is undoubtedly long enough to recover from the effects of a panic or business prostration, that period of grace, given in case of any possible default on Class B, would enable the Company to sustain itself against all contingencies, and would prevent the fall in the market values of Class

A, which might otherwise result from suspension or insolvency. A striking instance of the effect of the bad credit of a debtor upon the market value of an obligation, the security of which was in no manner affected by the insolvency of the obligor, is shown by the fact that the Stock Exchange quotations for the consolidated mortgage of the Company fell to par upon the announcement of the suspension last May.

When it is considered that the annual charges upon, say \$75,000,000 of Class A, and \$65,000,000 of Class B, making together, \$140,000,000, which would probably be sufficient to retire all present obligations of the Company, would be at five per cent.

only	-	-	-	-	-	\$7,000,000 00
And that in the present year, with nine						
months working at half time, the two						
Companies have earned	-	-				8,785,586 00
						<hr/>
Showing a surplus of	-	-				\$1,785,586 00
And that the bonds would be a first						
lien upon property worth, according						
to the list of assets before given	-					\$161,258,070 59
To which must be added for value of						
leased lines securities purchased, say						50,000,000 00
						<hr/>
Making a total of	-	-				\$211,258,070 59

There can be but little doubt that the new issue would command a high market price.

Assuming that say \$140,000,000 of the new bonds could be sold for no greater sum than par, that all the obligations in the above list could be retired or pur-

chased, and that the deferred income bonds are issued, the saving in fixed charges would be as follows :

Total full fixed charges, including sinking funds as per statement on page 6,	- - - - -	\$10,657,116 88
Interest on \$140,000,000 at 5 per cent.,		\$7,000,000 00
		<hr/>
Saving - - - - -		\$3,657,116 88
		<hr/>

As the net earnings of the present year have been - - - - -	\$8,785,586 00
If the fixed charges had been but -	7,000,000 00
	<hr/>

There would have remained for dividend fund - - - - -	\$1,785,586 00
	<hr/>

Or over 5 per cent. on the share capital.

It will be, of course, a long time before all the obligations in the above table can be retired or purchased. The consolidated and prior issues being a first lien of under \$25,000,000, averaging $6\frac{1}{2}$ per cent. interest, are not likely to exchange for a 5 per cent. security until their bonds are so near maturity as to make them less valuable than a 5 per cent. perpetual or 50-year obligation, and therefore but little, if any, relief can be expected from any change in the consolidated mortgage and prior issues.

With all obligations under head of No. 2 in the condensed tables the case is different. The Improvement mortgage has no lien upon the coal lands; the accumulation of sinking funds, for which the Company has a right to draw at par, next year will amount to about

\$1,350,000, or nearly 15 per cent. of the entire issue. This, with the rapidly-increasing accumulative sinking fund, will prevent the Improvement mortgage from rising in value much above par, and enable the Company to exhaust the loan very rapidly, either by voluntary exchange, or by purchase with the proceeds of the new issue. The divisional coal land mortgages have but eleven years to run, and though first liens upon particular tracts of land, the great majority of them will doubtless be glad to exchange for a well-secured perpetual obligation, which will command a higher price in the market. The bonds and mortgages on real estate can be paid at any time, and the general mortgage scrip matures in 1882. This leaves, out of Group No. 2, but the General mortgage, now selling at 86 per cent., which, it is expected, will rapidly be absorbed, either by purchase with the proceeds of or exchange into the new bonds. Of those embraced in Class No. 3, there will be but little, if any, difficulty. The income mortgage can be paid at any time; the scrip is due in 1882; the debentures and convertibles now selling at from 40 to 60 per cent. will gladly exchange at reasonable rates into a mortgage obligation, or can be bought from time to time with the proceeds of the new issue, on very favorable terms. It will, of course, be necessary that the right of conversion into stock shall follow all convertible bonds exchanging into the new issue. With the leased lines obligations in Class No. 3, but little can be expected to be accomplished for some time, but with those under the head of Number 4, most favorable exchanges and purchases can be made. It must of course be expected that as soon as it is known that purchases and exchanges are to be

made, the market value of the securities will appreciate, but it is believed that within a year, by the issue of the proposed new 5 per cents., and the deferred income bonds, the following saving in fixed charges can be made :

1½ per cent. on \$100,000,000, - - -	\$1,500,000
Saving in interest on floating debt by issue of deferred income bonds, - - -	600,000
Saving in sinking funds, - - -	600,000
Total, - - - - -	<u>\$2,750,000</u>

Which is much more than the most earnest advocate of forcible scaling or foreclosure could have hoped to accomplish. Such a saving would reduce the fixed charges and rentals to \$7,957,116.88, or \$728,469.12 less than earned in the present year, and place the Company beyond all danger of disaster.

As the proposed new mortgage will be without sinking funds, and as at least one-half, and possibly all, of the issues of bonds under it will be perpetual, it will be necessary to guard against the loss of security due to the gradual exhaustion of the coal in the lands of the Company; and for this purpose I would propose that 5 cents for every ton of coal taken from the lands, which would amount before exhaustion to at least \$90,000,000, should be annually paid into the hands of the trustee of the mortgage to be expended by the Company with the approval of the trustee, either upon the present estates of the Railroad Company, or in the purchase and acquisition of new property, provided such expenditure, or purchase, or acquisition, in the opinion of the trustee, adds an additional security to the mortgage equal to the amount so expended.

It is proper to say that within the last two or three weeks this plan of refunding the debt of the Company, with all the details necessary for its thorough examination, has been confidentially submitted to experienced financiers, representing influential American, English, and Continental bankers, and has met with their entire approval. I have had an offer by a most responsible and respectable house to take charge in America and in Europe of the entire scheme, for a commission to be agreed upon, and to furnish the Company in advance of the issue of the new loan with all the capital necessary, from time to time, to purchase the obligations which must be retired, or placed in trust, as a preliminary requisite to the issue of the new obligations. And I have also had an offer to take at a firm price without commissions, five million dollars of each A and B classes, and though the price offered is less than I think the bonds will bring, it was sufficient to enable the Company to save, in any event, in fixed charges an average of from three to five per cent. upon the par of the issue. Having had previously some communication upon the subject of the proposed issue with Europeans who had pledged their co-operation, I do not think it would be proper for the Company to accept any offer of purchase or agency without further consultation with them, and for the purpose of such consultation I am about to visit London and Paris, and trust that before my return in January, all preliminary negotiations for the success of the issue will have been completed.

Although the object of this paper was to present the above plan of financial relief, it is but proper, while I am communicating directly with the shareholders, to

make use of the opportunity to refer to other subjects especially as my absence may possibly prevent me from furnishing as full a report of the condition of the Company as is usually presented at the annual meeting.

Alluding first to the prior reference to the value of the coal lands, and to the estimate I have placed upon their value in the list of assets of the Company, I have to say that annexed to this statement will be found a report by Mr. Joseph S. Harris upon the value of the coal property of the Company. Mr. Harris was for several years in the employ of the Coal and Iron Company as a mining engineer, next in rank below the chief engineer, Mr. Pleasants, but for some years has been Mining Engineer for the Lehigh and Wilkesbarre Coal Company, and the Lehigh Coal and Navigation Company, and now occupies the position of General Manager for the Central Railroad Company of New Jersey. Immediately after the appointment of the Receivers, one of the counsel for the latter, who had been employed by the Company at the date of its failure to act as one of its legal advisers, was anxious to have reports made upon the value of the coal and iron lands of the Company, and suggested the names of Mr. Joseph S. Harris to report upon coal lands, and Mr. Franklin Platt to report upon iron ore lands. These selections being approved by the Receivers, I wrote by their request the following letter to Mr. Harris:

“COPY.”

Philadelphia, June 17th, 1880.

JOSEPH S. HARRIS, ESQ.

DEAR SIR:—I have been requested by the Receivers to write to ask you to make for them a full report upon the condition, value, and capacity for production, and present and future earning power of the coal lands and colliery property of the Philadelphia and Reading Coal and Iron Company.

It is desired to have your opinion and judgment—

First.—With reference to the value of the whole estate treated as an entire property, both with reference to its being an independent estate and as being owned by and connected with the lines of the Philadelphia and Reading Railroad Company, and to have your carefully considered opinion and advice as to the best manner of treating and managing the property so as to produce the greatest revenue consistent with its future safety and productiveness, both directly for the Coal and Iron Company and indirectly for the Railroad Company as a transporter.

Second.—It is also desired to have your report with reference to the value, condition, and present and future earning capacity of each particular tract or body of lands, and of each colliery which constituted a separate purchase by the Coal and Iron Company, and especially of each tract mentioned and described in the accompanying list of tracts, upon which there are separate mortgage liens, and as the question of the payment of interest upon the mortgages upon these tracts, must be considered

by the Receivers at an early day, it is requested that you take up this second branch of the question first, and that you report thereon as quickly as possible, especially with reference to those particular tracts upon which interest is due on July 1st next, so that the Receivers may have the benefit of your opinion and advice, when considering the question of the payment of such interest.

Mr. Whiting and all other officers of the Company, will permit you to have full access to all maps, records, papers, and accounts in their possession, which may be of service to you, and will give you such other personal aid and assistance, as may from time to time be required by you.

Very respectfully,

(Signed), F. B. GOWEN.

Some two months after his appointment, Mr. Harris submitted the elaborate report which is hereto annexed. In this report, so long as he confines himself to his profession as a mining engineer, his conclusions are in the highest degree satisfactory; the enormous quantity of coal contained in the lands; the length of time the deposit will last; the fact that during the next few decades the Schuylkill region and the Company's estates (even according to the limited idea of future development entertained by Mr. Harris) will treble their production, while the Wyoming region in the same time will increase but 20 per cent., and the Lehigh region will fall off 60 per cent., will effectually demonstrate the great advan-

tage possessed by the Philadelphia & Reading Railroad Company over its competitors in holding a body of lands able to furnish an unlimited tonnage for generations to come. When Mr. Harris steps beyond the bounds of his professional employment, and ignoring the request contained in his letter of instructions, that the whole estate should be "treated as an entire property," "so as to produce the greatest revenue consistent with its future safety," proceeds to criticise the policy of his former superior officers—the Managers and President of the Company—in purchasing so large an amount of coal lands, and to recommend the disintegration of the estate, by the sale of a number of tracts; it is but necessary to say that he was not requested to express an opinion on such a subject. Those whose actions and policy he criticises were wiser in their generation than himself, and much more competent than he supposes to form a correct judgment upon such a question. Nothing would be more detrimental to the best interests of the company than to follow his recommendations to sell off or get rid of a large portion of the estate. As the market does not yet take the quantity of coal that can now be produced by collieries actually opened, the company having worked but little more than half time during the year, with many of its collieries idle during the entire season—it would follow that for every new colliery opened or worked upon lands to be sold by the company, or for every idle colliery of the company started by a purchaser, there would be such an increased production thrown upon a market already crowded, that to the extent of the additional output, would compel the company to cease working at the collieries it retained. If by work-

ing but half its collieries, the company succeeds in getting fair prices in consequence of keeping the other half idle, what would be thought of the policy of selling the idle ones so that competitors could produce the tonnage required by the market, and compel the company either to close those which it retained, or to suffer loss by continuing them at the low prices caused by over production?

But it is in dealing with the question of the money value of the land that Mr. Harris makes the gravest mistakes. This money value is arrived at by an algebraic equation—the known quantities being: First, that but 27 per cent. of the coal in the ground, or 400 tons per acre for every foot in thickness of coal seams, can be sent to market. Second, that thirty cents per ton only, for all future time, will be realized both for royalty and for the profit of mining. Third, the quantity to be produced annually until exhaustion of the land. Fourth, that 8 per cent. compound interest is to be charged against the land, of which 2 per cent. annually, compounded at 8 per cent., is for taxes and improvements. Fifth, that while the land is to be debited with 8 per cent. compound interest, but 4 per cent. compound interest is to be allowed for the investment and accumulation of a sinking fund to provide against the exhaustion of the mineral deposit. With these factors—the unknown quantity, or x , being the value of the land—Mr. Harris ascertains such money value to be, including all equipments and improvements, in round numbers, \$30,000,000.

I propose to show that the premises upon which the conclusion is founded are absolutely incorrect. In the

first place, 27 per cent. of the coal in the ground, or 400 tons per acre for every one foot in thickness of coal seams, is much less than can be taken to market. It is doubtless true that in times past, under a wasteful and extravagant system of mining, especially in large veins, but from 20 to 35 per cent. of the coal in the ground was sent to market; but in those days the pea and buckwheat sizes of coal, and sometimes the chestnut coal, were thrown on the culm pile. With limited capital it was the custom for tenants of mining rights, in order to get coal quickly, to open their mines so badly that when the pillars had to be taken out more than half of the coal contained in them was lost. Again: the proportion of coal that can be sent to market from a small vein is always greater than in a large one, and it is unfair to apply to a whole region a rule applicable only to one large bed. Apart, however, from all estimates founded upon the data of the past, it can hardly be possible that the large anthracite companies, or even the State itself, would long permit so shameful a waste of coal in working as 73 per cent., or suffer a system of mining to prevail under which for every 100 tons of coal in a vein but 27 were sent to market. So far, however, from the past furnishing any warrant for the estimate of 27 per cent., the cases upon which such estimate is founded were the exceptional ones of large veins, badly worked, and when coal, now considered merchantable, was thrown away. At a well-known colliery in the Lehigh region working the Buck Mountain vein, 1,000 tons per acre for every one foot thickness of the vein, or to two and one-half times the amount assumed by Mr. Harris, has been actu-

ally shipped to market. It is in my judgment fair to assume that in the future, when all the smaller sizes and even the culm itself will be merchantable, more than 50 per cent., and in the present at least 40 per cent., instead of 27 per cent., of the coal in the ground can and will be sent to market; and taking 40 per cent. as the proper factor, without changing any other of Mr. Harris' premises, the total money value of the estate would be over \$45,000,000.

Upon the question of the amount of money to be realized in the future for the royalty upon coal, as well as for the profit of mining, Mr. Harris is certainly wrong. The coal market is now taking about 25,000,000 of tons of anthracite coal per annum. The consumption of the future is rapidly increasing. With the exception of the last, there has been no decade in which the consumption has not doubled; and though such a ratio of increase cannot be expected for the future, yet no one sufficiently familiar with the subject can doubt that it will not be ten years before the consumption reaches 35,000,000 of tons—an increase of less than thirty per cent. in ten years, as against one hundred per cent. in all previous decades prior to the period of business depression which followed the panic of 1873. From this point the demand will certainly only be limited by the output. Now, if Mr. Harris is right in his theory, that by the year 1890 the total output of anthracite coal cannot exceed 32,000,000 of tons; that by the year 1900 it will not be above 36,000,000, and that the maximum production, say 37,000,000, will be reached in 1910, at which time the Schuylkill region will be producing two-thirds of the entire output; it is difficult to conceive

how he limits the united profit of landlord and miner to thirty cents per ton. Certainly, under such conditions as must exist, according to Mr. Harris, within ten years, anthracite coal will be considered a luxury, and the profit to be made upon it by the owner and miner will only be limited by the extent to which the rapacity of shareholders can be controlled by the justice and forbearance of the managers of the anthracite companies. Without the slightest injury to the public this profit may be expected to be one dollar per ton, which would make the actual value of the lands \$150,000,000, but if this profit is restricted to fifty cents per ton, the value of the estate even at the ratio of production estimated by Mr. Harris, would be \$75,000,000, though subjected to the injustice of a debit of 8 per cent. compound interest. And as there would be no difficulty in renting the properties, as now improved, for 50 cents per ton, which, with 40 per cent. for output, according to Mr. Harris's system of calculation, would make their money value \$75,000,000, there can be but little question that the value given in the list of assets is entirely within the bounds of a fair appraisalment.

In Mr. Harris's report of money value, and in the process by which he arrives at the result, he omits all reference to the value of the property to the Philadelphia and Reading Railroad Company as a transporter, though his attention was called to that element of value, and he refers to it in the preliminary discussion of the general subject. The transportation of coal has always been a source of great profit to the Railroad Company, and the only doubt in the past about the permanency of the earning power of the Company as a transporter, was

due to the fear that rival companies would tap the Schuylkill Region, and divert the coal tonnage to their own lines. This danger was happily averted by the purchase of the coal lands, and the fact that at the lowest probable rates the Railroad Company alone will in the future realize a profit as a transporter of at least fifty cents per ton for transportation, adds an element of value to the lands, which, if included as one of the factors in Mr. Harris's equation, would have produced an enormous aggregate even after the most liberal allowance for interest upon the value, and renewal of the plant required to conduct the transportation.

It will be observed on reading Mr. Harris's report and referring to table G, which accompanies it, that the sum of thirty cents per ton is not the result of striking an average of many different sums representing the respective profits to arise from working eighty different tracts, each having its particular advantages or disadvantages as compared with the others, but that it is a Procrustean bed to the dimensions of which each tract is inexorably required to conform, and thus a body of lands located at the shipping point of the main line, where no lateral railroad freights or terminal expenses are to be paid, is credited with no higher rate of profit than another tract thirty miles more distant from market, upon the product of which forty-five cents of lateral tolls have to be paid before the coal reaches the location of the former, at which the product of each brings exactly the same price; while in other cases the products of collieries producing a special kind of coal, for which there is an unlimited demand at good profits, is estimated to be of as little value as the output of other collieries producing the

class of coal common to all regions, and the profit upon which always depends upon the prices established by the competition of other companies. By this system of computation the money value of tract No. 72, known as the the Munson and Williams lands, embracing over 6,000 acres of most valuable coal land, and now actually producing an annual profit of at least \$400,000, which can be almost indefinitely increased in the near future, is reduced to \$1,642,007, although after paying interest on that amount, the aggregate profits of the four succeeding years will (if nothing unforeseen occurs) produce a much larger sum than that reported as the total value, and the land will then be worth, as it is now, from six to ten millions of dollars.

But, erroneous as Mr. Harris's conclusions are about the percentage of production, and the future profit to be realized from mining, I have not been called upon to defend the lands in which I take so much pride from any injustice half so serious in its consequence as that which reduces their present money value to such a sum as will remain after deducting the enormous aggregate of 8 per cent. compound interest during the period of their exhaustion, or until a sinking fund arising from their own revenues, made accumulative at 4 per cent. per annum, shall have produced a sufficient sum to represent the assumed value of the land. This is unjust in principle, unjust in its details, unjust in its application to the whole estate, and frightfully unjust in its effects upon particular bodies of land. If the sinking funds are only credited with 4 per cent. compound interest, why is not the land charged with but 4,

or, at the utmost, 6 per cent. ? It is assumed that 2 per cent. annually is for taxes and improvements ; but if this is required as an annual charge, why is it compounded at 8 per cent., instead of 4, or, at the utmost, 5 or 6. The interest of 6 or 7 per cent. upon the coal land mortgages runs only for ten or eleven years, and if for the long time over which Mr. Harris's sinking funds are to extend 4 per cent. is the best rate at which they can be invested, why is it assumed that a company which can only invest its money at 4 per cent. will be compelled to borrow at 8, and why, if such a condition could possibly exist, does not Mr. Harris suggest that the sinking funds be invested in reduction of the Company's own debt ?

It will be seen also, that this inflexible annual charge of two per cent., compounded at eight per cent., is made against all tracts as necessary for taxes and improvement, no matter whether, as in some cases, a tract is already so well supplied with colliery plant, as never to require another dollar expended for the purpose, or as in others, that all the coal upon the tract will be worked out by the improvements already erected upon, or hereafter to be supplied out of the two per cent. annual charge against an adjoining tract. In the case of the Philadelphia and Mahanoy Lands, No. 21 of Table G, reported to be worth \$3,189,877, and to be probably exhausted by the year 1961, this annual charge of two per cent. compounded at eight, is made, though there are already ten collieries upon the tract, and it is not at all probable that any additional improvements will be required, beyond those which will be from time to time provided

out of the amount charged to the mining of coal. Again this system plays havoc with the values of such lands as the Company, entirely for its own purposes, will not be likely to work for many years to come. Thus the Tamaqua Lands, No. 24 of Table G, located at a shipping point without lateral railroad charges, and which contain according to Mr. Harris's report, 68,110,000 tons of merchantable coal, are reported as worth but \$1,388,797, while the Philadelphia and Mahanoy Lands above referred to, containing but 45,144,000 tons, and subject to lateral railroad charges, of from fifteen to twenty cents, are reported to be worth \$3,167,477, the difference being produced by the eight per cent. compound interest, running against the Tamaqua tract, which may remain idle for many years, during which no revenue is being produced for the sinking fund.

Again, the two adjoining properties, No. 79 and No. 80, belonging to the Mammoth Vein Coal & Iron Company, and the Delaware Coal Company, which Mr. Harris reports as being able, after the year 1905, to produce a revenue of \$180,000 per annum for a hundred years, are reduced in value by this charge of compound interest to but \$617,902, including improvements, for 2,299 acres of Mammoth Vein Coal lands, containing at 27 per cent. of the total deposit over 60,000,000 tons of merchantable coal, notwithstanding the fact that the two deep shafts, and colliery plant and equipment upon these tracts has cost over \$1,000,000. And for the same reason, 10,500 acres of the Schuylkill and Susquehanna tract, containing, by Mr. Harris's computation, 42,000,000 tons of coal, which can be sent to

market, and being capable of producing at a profit of but thirty cents per ton, an annual revenue of \$120,000 for one hundred and five years, is reported as worth but \$81,416, or less than eight dollars per acre, while the Philadelphia and Mahanoy lands, above referred to and reported as being able to produce a revenue of \$150,000 per annum for but 80 years, are estimated as worth \$3,167,477, or \$1,245 per acre. Mr. Harris seems entirely to have overlooked the fact that he himself had recommended the sale of some of the lands, and that one of the elements of the money value of any property is the price it would bring in the market, and it is certain that an estate of coal lands capable, at but thirty cents per ton for royalty, of producing for 105 years an annual revenue of \$120,000, will probably realize at public sale a sum nearer \$1,500,000 than \$81,416, and is apt to find a ready purchaser among capitalists and coal operators who could within two years realize the expected annual revenue, without the danger of the value of their property being overshadowed by an imaginary book-keeping charge of 8 per cent. compound interest during fifty years of non-production.

There is a rough "rule of thumb" method of estimating the value of coal lands, which can be applied whenever the quality of the coal, the character of the veins, and the proximity to market is known—and that is, to rate them at so much per acre according to current market value. For some time but little good coal lands in other regions have been bought at less than from \$750 to \$1,250 per acre. In England, where the aggregate

thickness of the seams is much less than in the Pennsylvania anthracite region, and where the revenues of the owner are generally produced from royalties of from sixpence upward per ton, coal lands are worth from \$3,000 to \$5,000 per acre. It is doubtful whether any of the other anthracite coal companies of Pennsylvania would entertain an offer for the purchase of their coal lands at \$1,500 per acre; and I am sure that some of them, especially the two corporations whom Mr. Harris now represents, would consider their balance sheets very much distorted, if the valuation of their coal estates, including improvements, was reduced to below \$350 per acre, the price reported by Mr. Harris as the value of the coal lands of the Philadelphia and Reading Coal and Iron Company. The truth is—that those who were anxious for a report upon the value of the coal lands desired a low valuation, and it has been obtained by means of an algebraic equation, though I am confident it could not be produced in any other manner. In saying this I do not intend to reflect in any manner upon Mr. Harris's motives, nor to find fault with or criticise anything but his judgment. I doubt whether any one could be found more pure-minded, or of higher integrity of character, than himself; but apart from the open honesty and simplicity of his character, the quiet paths of his old profession, in which, for many years, he had to oppose nothing but the secret forces of nature, have unfitted him to contend with or understand the depravity of humanity; and I am sure that in the more enlarged sphere of a railroad manager, upon which he has recently entered, he will be shocked to find how often

it will require a little of the wisdom of the serpent to keep himself as harmless as the dove.

The report of Mr. Platt upon the subject of iron ore lands, while not dealing as fully with money values as does the report of Mr. Harris, is equally unfavorable, but the subject is not of sufficient importance to justify the expense of printing the report.

The total iron ore estates of the Company cost but \$655,819.50. Their value is estimated in the list of assets at but \$300,000. There can be no doubt that the iron ore lands could have been acquired at less prices recently than were paid for them at the date of purchase, and had it been known through what depression the iron trade of America would have to pass in the last few years, their purchase would have been delayed in order to take advantage of lower prices. They were bought to insure at all times a supply of ores to the blast furnaces of the Schuylkill Valley, and one tract on the Hudson was intended to provide back loading for returning coal barges. All these lands were bought after examination and reports by gentlemen of equal professional attainments and of far greater experience and practical knowledge than Mr. Platt.

When I became President of the Company, nearly twelve years ago, I came to the conclusion that its only weakness was its inability to control its coal tonnage, and I advocated and secured the purchase of the coal lands. I said then, as I believe now, that the true policy of the Company was to purchase the lands, and

secure proper connections and terminal facilities at tide-water; that no attempt should be made until this was accomplished to secure western alliances or build western railroads. I thought I saw then, as I surely do now, that the struggle to secure east bound western freight would be determined in favor of the Company that could furnish a western bound tonnage for the returning cars. The enormous quantity of western produce seeking shipment from the Atlantic ports is so great in comparison to the quantity of merchandise going westward, that the trunk lines must depend principally upon anthracite coal, the future fuel of the prairies and the lakes to load their returning cars, and the Company that can get a back load of anthracite at from $\frac{1}{3}$ to $\frac{2}{3}$ of a cent per ton per mile, will be able to outbid for east-bound traffic any rival that has to haul its cars back empty. The Philadelphia & Reading Railroad Company, owning fully one-third of the area, and considerably over forty per cent. of the tonnage of the anthracite regions, is the only Company that in the future will be able to supply in large quantities beyond the requirements of its own lines the tonnage necessary for back loading of trunk line cars. Without the expenditure of any money by the Company, its system of lines will be connected with western roads, and an abundant east bound tonnage will be secured, that will open up a valuable western market for the surplus coal product of the Coal & Iron Company. Already the Reading line is the Philadelphia terminus of the system of roads tributary to, and connected with, the New York Central Railroad Company, and a new connection, about to be built, will make a still closer con-

nection and alliance with the latter Company, as well as with the Atlantic and Great Western lines. The New York traffic of the Baltimore & Ohio Railroad Company is now going to New York via the lines of this Company, and in a short time connections to be made via Harrisburg with the Baltimore & Ohio and Chesapeake and Ohio Lines will open the south and southwest markets to the coal trade of the Company. The New York, Lake Erie and Western Railroad traffic to Philadelphia passes over the North Pennsylvania Branch from the Lehigh Valley Road; and by means of the Delaware, Lackawanna and Western Railroad, which has always been an ally, the Reading Railroad may expect to secure the Philadelphia business of the Wabash System; and thus, without the expenditure of a dollar, a territory far greater than that drained by the Pennsylvania Railroad is open to supply east bound traffic to the Reading Railroad, and to take from the Coal & Iron Company its surplus production of coal. Indeed, to any one conversant with the limited area of anthracite coal owned by the Pennsylvania Railroad Company, and the rapid exhaustion of the deposit in other regions, it must be apparent that before ten years the Pennsylvania Railroad Company itself will be glad to divert ten or twenty per cent. of its east bound traffic to the lines of the Reading Company at Milton, Dauphin, or Harrisburg, in consideration of the cars being returned at the same points loaded with anthracite for western markets.

I must also take advantage of the opportunity now afforded to reply to many criticisms upon the Company,

and upon its General Manager, Mr. John E. Wootten, based upon an allegation of extravagant and incompetent management of the Transportation Department. For many years the Company has invariably included its large payments for rentals of leased lines among its working expenses ; and although this fact is known to every one of intelligence who reads its reports, yet it has enabled designing persons, through the medium of unfriendly journals, to allege that the working expenses of the Reading Railroad are generally over 70 per cent., while those of other companies are from 50 to 60 per cent.

The truth is, that the Reading Road is one of the most, if not the most, economically worked roads in the country. This cannot now be said to be due to the favourable grades of its main line, as, its system having grown to cover 826 miles of road, the main line of 93 miles is but a small proportion of the whole, and its advantages are overbalanced by the 208 miles of coal laterals, with their heavy grades and inclined planes.

Mr. Wootten began his railroad service in the shops of the Company, and by his own merits has risen through all grades of promotion to be its General Manager. The fact that, (with the exception of the lives lost three years ago, by the accident on the Pickering Valley Branch, caused by a washout of the road-bed during the night, by a freshet of unusual severity, against which no ordinary precaution would have availed,) out of ninety millions of passengers carried, no single one has lost his life by any injury suffered when

he was occupying his seat in the cars, will show with what care the transportation of passengers is conducted, while the following carefully prepared table of the proportion of working expenses to gross receipts, for the last ten years, of the principal railroads of the country, will effectually set at rest all reports about the extravagant management of the Company.

Proportion of Operating Expenses to Receipts, of Railroads named, from 1870 to 1879, inclusive.

NAME OF RAILROAD.	1870 per cent.	1871 per cent.	1872 per cent.	1873 per cent.	1874 per cent.	1875 per cent.	1876 per cent.	1877 per cent.	1878 per cent.	1879 per cent.	Average per cent.	Remarks.
Philadelphia and Reading.....	58.75	51.00	57.30	55.25	50.80	53.70	57.00	50.70	50.40	52.30	53.72	
Allegheny Valley.....	46.75	54.75	57.50	70.00	65.75	58.25	55.50	54.00	51.75	57.50	57.17	
Atlantic and Great Western.....	.....	83.25	84.33	67.25	77.75	81.00	80.75	80.00	78.75	83.00	79.55	1871 to 1879
Baltimore and Ohio.....	69.25	63.65	61.40	64.62	63.30	63.59	63.94	62.28	56.44	54.18	62.70	
Boston and Albany.....	68.36	72.93	74.47	79.26	75.56	70.46	68.58	71.26	70.37	61.36	71.20	
Cleveland and Pittsburgh.....	54.25	48.25	44.25	51.98	51.22	52.66	60.98	55.42	57.48	52.40	52.88	
Central, of New Jersey.....	57.18	55.66	59.49	47.46	48.09	55.70	54.34	56.81	58.80	60.84	55.40	
Delaware, Lackawanna and Western...	62.50	50.00	39.50	46.07	42.94	33.62	34.70	41.80	37.28	33.98	42.03	
Lake Shore and Michigan Southern....	64.00	63.75	65.25	68.44	63.13	69.61	65.09	62.03	57.39	55.64	63.43	
Lehigh and Susquehanna.....	.....	.....	54.25	39.00	38.75	54.00	46.00	54.00	48.50	47.50	47.73	1872 to 1879
Lehigh Valley.....	60.75	65.50	64.75	57.75	51.33	54.00	54.50	48.75	44.50	50.50	55.25	

Michigan Central.....	64.00	63.65	69.04	72.38	71.36	70.11	72.43	66.37	63.55	63.97	67.60	
Northern Central.....	64.00	66.00	74.00	74.89	72.35	68.25	74.19	67.46	69.95	69.66	70.00	
New York, Lake Erie, and Western....	.....	.....	.....	.....	73.00	75.00	77.00	74.00	68.00	70.00	72.80	1873 to 1879
New York Central and Hudson River..	62.90	62.40	64.29	63.22	62.34	64.93	62.48	61.16	61.11	59.26	62.40	
Pennsylvania (Penna. R. R. Division)..	64.25	63.00	62.50	51.74	56.10	57.50	59.90	56.50	53.75	54.00	57.92	
Penna. and New York Canal and R. R.	67.25	73.50	72.75	70.00	51.50	63.50	64.00	57.50	62.75	56.00	63.80	
Philadelphia and Erie.....	100.00	100.00	100.00	88.50	69.75	71.64	65.00	64.50	70.00	69.00	79.80	
Phila., Wilmington, and Baltimore.....	64.00	63.25	59.75	64.38	61.75	58.50	52.00	60.19	58.83	55.00	59.76	
Pittsburg, Cincinnati, and St. Louis....	74.25	73.00	77.75	87.53	72.12	76.99	72.50	65.80	62.50	55.91	71.83	
Pittsburg and Connellsville.....	.....	77.50	106.75	99.25	83.50	89.00	68.00	70.75	62.50	54.00	79.00	1871 to 1879
Pittsburg, Fort Wayne, and Chicago....	.....	52.50	53.75	63.38	58.55	58.50	61.00	57.89	54.52	55.92	57.33	1871 to 1879
United, of New Jersey.....	.....	.....	.....	.....	69.25	68.00	58.80	71.00	66.33	67.00	66.75	1874 to 1879

From the above it will be seen that the Philadelphia & Reading Railroad made a better showing than any except the three following: The Cleveland & Pittsburg, which is very nearly the same; the Lehigh & Susquehanna, which, being part of the through line of the Central New Jersey Railroad Company, by which it is leased, has no expensive Eastern terminal charges; and the Delaware, Lackawanna & Western Railroad Company, the exceptionally favorable showing of which is probably due to the fact that being the owner as well as transporter of its coal tonnage it has always made a larger credit to its transportation account than could have been secured in dull times as freight upon coal tonnage which it did not own.

I submit the following table, showing proportion of operating expenses to receipts, and cost of moving freight per ton per mile for the eleven years since I have been President of the Company, during all of which time the coal lateral railroads have been worked by the Company; as compared with the same items for the ten years preceding my administration, during half of which time the expenses of the coal laterals were not borne by the Company:

YEAR.	Proportion of operating expenses to receipts, per cent.	Amount received per ton for transportation of coal on Main Line.	Cost per ton per mile for moving freight and coal on Main Line, Branches, and Laterals.	
			Excluding weight of cars.	Including weight of cars.
1859	50.8	\$1 15 $\frac{3.5}{100}$		
1860	45.4	1 23 $\frac{9.6}{100}$		
1861	46.1	1 28 $\frac{7.5}{100}$		
1862	40.0	1 24 $\frac{6}{100}$		
1863	38.2	1 59 $\frac{8}{100}$		
1864	43.6	2 35	0 $\frac{348}{1000}$	0 $\frac{415}{1000}$
1865	48.6	2 79 $\frac{1}{100}$	1 $\frac{193}{1000}$	0 $\frac{525}{1000}$
1866	53.6	2 21 $\frac{9}{100}$	1 $\frac{67}{1000}$	0 $\frac{468}{1000}$
1867	59.7	1 85 $\frac{8}{100}$	1 $\frac{87}{1000}$	0 $\frac{455}{1000}$
1868	60.9	1 74 $\frac{9}{100}$	1 $\frac{15}{1000}$	0 $\frac{445}{1000}$
Average for } 10 years.	48.7	1 85 $\frac{4}{100}$	1 $\frac{53}{1000}$	0 $\frac{462}{1000}$
			Average for 5 years.	
1869	53.1	1 96 $\frac{9}{100}$	1 $\frac{48}{1000}$	0 $\frac{459}{1000}$
1870	58.75	1 73 $\frac{3}{100}$	0 $\frac{979}{1000}$	0 $\frac{427}{1000}$
1871	51.0	1 80 $\frac{8}{100}$	0 $\frac{879}{1000}$	0 $\frac{385}{1000}$
1872	57.3	1 54 $\frac{4}{100}$	0 $\frac{872}{1000}$	0 $\frac{382}{1000}$
1873	55.25	1 71 $\frac{2}{100}$	0 $\frac{954}{1000}$	0 $\frac{419}{1000}$
1874	50.8	1 72 $\frac{1}{100}$	0 $\frac{873}{1000}$	0 $\frac{388}{1000}$
1875	53.7	1 75	0 $\frac{998}{1000}$	0 $\frac{438}{1000}$
1876	57.0	1 45 $\frac{1}{100}$	0 $\frac{908}{1000}$	0 $\frac{398}{1000}$
1877	50.7	1 27 $\frac{1}{100}$	0 $\frac{674}{1000}$	0 $\frac{295}{1000}$
1878	50.4	1 48 $\frac{9}{100}$	0 $\frac{734}{1000}$	0 $\frac{322}{1000}$
1879	52.3	1 12 $\frac{6}{100}$	0 $\frac{649}{1000}$	0 $\frac{284}{1000}$
Average for } 11 years.	53.7	1 57 $\frac{1}{100}$	0 $\frac{852}{1000}$	0 $\frac{374}{1000}$

The proportion of expenses to receipts must, of course, depend entirely upon, and vary with, the fluctuating amounts received for transportation. If \$2 per ton is received for freight on coal, the proportion of working expenses, after making all allowance for increased rate of wages and supplies, would be much less than it would if but \$1 per ton was received. The true element for instituting relative comparisons is the cost per ton per mile for moving freight, and judged by either standard, the above table conclusively demonstrates that Mr. Wootten's management of the transportation department of the Company is entitled to praise, and not to censure.

There will be found in the appendix to this statement full copies of letters, which recently passed between Mr. Thomas Wilde Powell, representing the London Committee of the general mortgage bondholders, and the Managers of the Company, upon the subject of the formation of an American Committee, as well as copies of letters between Mr. Powell and myself. These letters sufficiently explain themselves; and I have only to add to what is contained in them that, before any of them were written, and long before Mr. Powell left England, in deference to the request of the London Committee, that an American Committee should be formed, I had suggested for the latter Messrs. J. B. Lippincott, Eckley B. Coxe, I. V. Williamson, Moses Taylor, and either Mr. McKean or Mr. C. L. Borie, who held or represented over \$12,000,000 of the junior obligations and securities of the Company, and I proposed to associate with them Mr. Anthony J. Drexel, of Philadelphia, as a financier, together with Mr. John W. Garrett, President of the

Baltimore & Ohio Railroad Company, and Mr. Isaac Hinckley, of the Philadelphia, Wilmington & Baltimore Railroad Company, as two of the best known and most conservative railroad managers in America. This committee did not satisfy Mr. Powell, and in lieu of it, the present American Committee was subsequently formed.

There can be no doubt whatever that although Mr. Powell was a representative of creditors of the Company, most of whom it is believed desired nothing so much as to obtain their money, he was more intent upon making a change of the management of the Company, than of collecting the money due to his constituents, and it is certain that, when in this country, he did all in his power, directly and indirectly, to prevent the Receivers from paying his principals, even resorting by means of his counsel to legal proceedings, to prevent the payment of interest on the General Mortgage Bonds.

The payment of interest upon these bonds, which may be expected, upon the adoption of the financial scheme herewith presented, will doubtless prove more satisfactory to the bondholders than any change of management without the money, and it will certainly relieve the Company from the necessity of further considering the status of Mr. Powell.

FRANKLIN B. GOWEN,

President.

Philadelphia, December 6, 1880.

APPENDIX.

A.—CORRESPONDENCE BETWEEN BOARD OF MANAGERS AND MR. THOMAS WILDE POWELL.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,
General Office 227 South Fourth Street.

Philadelphia, October 20, 1880.

THOMAS WILDE POWELL, ESQ.

DEAR SIR:—I am directed by the Board of Managers of the Company to say, in response to the suggestion made by you at your conference with them this morning that there should be an American Committee appointed to act in conjunction with the London Committee, or with you as the representative of the latter, that the Board will agree to the appointment of a proper Committee, and that they will be willing to act themselves as a part of such Committee. In response to your request that they should suggest additional names, they have directed me to present for your consideration the following names: Mr. Moses Taylor, of New York; Mr. B. B. Comegys, President of the

Philadelphia National Bank, Philadelphia; Mr. Anthony J. Drexel, of Philadelphia; Mr. Isaac Hinckley, President of the Philadelphia, Wilmington and Baltimore Railroad Company; Mr. Lindley Smyth, President of the Pennsylvania Company for Insurance on Lives, &c.; and Mr. Thomas Smith, President of the Bank of North America.

I am further directed to say that the Board will unite with any or all of these gentlemen as such Committee; or, if you have the slightest objection to any of them, the Board will be very glad to act with any gentlemen you may name who are interested in the securities of the Company.

Very respectfully,

(Signed) J. B. WHITE,
Secretary pro tem.

“COPY.”

32 SOUTH THIRD STREET,

Philadelphia, October 21st, 1880.

TO F. B. GOWEN, ESQ., *President,*

And the Board of Managers of the Philadelphia and Reading Railroad Company.

GENTLEMEN:—I am in receipt of the letter of your Secretary, of yesterday's date.

I am sorry to observe that the support which I received yesterday from some members of the Board, in favor of my theory of the proper constitution of the proposed Committee, has been overruled in favor of the

views expressed by President Gowen; my theory being that such Committee ought to be composed of groups of representatives of each of the several interests concerned, with the addition, if possible, of strong names to give prestige to the scheme; while President Gowen's idea, as I understood (and which seems to me to underlie your letter), was that the Committee should consist of the Board bodily with the addition of a few names of gentlemen who, as I understood, would not necessarily represent any special interests.

Allow me to refer to the position of the London Committee on this subject:

In the month of July last the London Committee, after careful consideration, arrived at the conclusion that the true policy of those whom they represented would be to have an adjustment of the affairs of the Company without foreclosure or sale; that in any scheme of this kind, the Company should undertake to pay us fixed charges only so much as in good years and bad they would clearly be able to meet, and that the holders of the subordinate interests should receive either income bonds or stock (preferred or common), adjusted upon some fair and equitable basis as between themselves, and also as between them and the Company, and that under no circumstances should the Company be in a position whereby the accumulation of fixed charges could again bring the Company into insolvency.

The Committee also believed that such an adjustment could be best arrived at by the formation of a committee in Philadelphia, properly representing these subordinate interests.

On the thirtieth day of July last resolutions were adopted by the London Committee to this effect, a copy of which I now enclose. A copy of these resolutions was sent to the Receivers in due course of mail.

I had hoped that I should find such a Committee in active operation when I arrived, and I then proposed to give my most earnest efforts, by conference with that Committee, for the promotion of such an adjustment.

You will please understand that the London Committee are interested in bringing about such an arrangement, because it would avoid the necessity of a foreclosure sale, and place the bonds of the Company upon a fixed basis as to the future.

Some weeks after the above resolutions had been forwarded to the Receivers we were informed no such Committee had been yet organized, and it now appears that the difficulty arose from Mr. Gowen urging the appointment of a committee composed in the main of members of the present Board. After considering the matter most carefully, I am constrained to say that I think the objection well founded, and, recurring to the words of the resolutions, that the Committee should be "composed of *representative* persons, having the confidence of the various classes of persons interested in the fixed charges," it appears to me that the Committee, as proposed by you, would not accord with the views of the Committee represented by me.

My objections do not arise from any want of respect for, or confidence in the integrity of the gentlemen composing the Board. I wish this most distinctly understood.

I do not propose here to re-argue the whole question of the fit composition of the Committee, as I presented my views very fully to you yesterday upon that subject ; but allow me to urge upon you most earnestly this one consideration, viz., that the presence of the whole Board (of which Mr. Gowen is a member), within the Committee might embarrass the action of the other members in many ways in discharging their difficult duties.

In what ways this embarrassment might arise must be too obvious to require explanation from me.

I wish to add that, as the London Committee have heretofore cabled Mr. Gowen, the objection is not made to *some* members of the Board going on the Committee as representing their own interests and those of the classes to which they belong, in some proper proportions. It is to the undue proportion contained in your proposition and that, practically, the Board, as a Board, are to be members of it. In fact, I may describe the objection as being that the Board propose to resolve themselves into a Committee with the addition of a few good names selected by themselves.

Be good enough to understand also, that I am contending for a principle which, I think, not only important, but essential to success in the scheme of readjustment, but that I wish to abstain from interfering in the personnel of the Committee, provided the constitution of it be good in principle and the representation of interests be fair and, therefore, in due proportion.

To that extent, I think, I have the right to go.

Under the grave sense of the responsibilities of the situation and the large interests involved, I have written

you at much length, and I would most earnestly urge upon you to reconsider the subject.

I say it with reluctance, but I do think the Board has hitherto failed to grasp the essence of the policy that should guide in the formation of the proposed Committee, and my earnest desire is to see that Committee formed and launched without any such serious mistakes as may impair its usefulness and, perhaps, prevent its success.

I would ask the favor of a reply at your early convenience.

Yours, very respectfully,

(Signed) T. W. POWELL.

"COPY."

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,

General Office, 227 South Fourth Street.

Philadelphia, October 25th, 1880.

THOMAS WILDE POWELL, ESQ.

DEAR SIR:—I am directed by the Board of Managers to acknowledge the receipt of your letter of 21st inst., and to say that they regret exceedingly that any difference of opinion should exist between them and yourself, either as to the proper course to be pursued in the present condition of the Company, or as to what transpired on the occasion of your recent conference with them. You will remember that the Board doubted the propriety of the appointment of any Committee, except one

that not only fully represented the interests proposed to be affected, but was also somewhat conversant with the business and property of the Company. You will further, doubtless, recall to your recollection that after a reference by the Board to the fact that a few gentlemen who were named, were really the owners of a very large proportion of the junior securities held in this country, and that their co-operation in any scheme of reorganization was of more importance than the approval of a Committee, you acquiesced so far as to say that if the Board wrote you a formal communication to that effect, suggesting in lieu of Committee, a conference with the few gentlemen as owners of the securities to be affected, you would give it proper consideration, communicate it to your friends in England, and probably meet the gentlemen referred to without the intervention of a Committee. I am further directed to say, that as the Board could not help feeling, at their interview with you, that you earnestly desired the formation of a Committee, they agreed, as a matter of courtesy and consideration for the gentlemen you represent, to yield their own opinions to your wishes, and they requested you to name some gentlemen as members of the Committee.

You will doubtless remember that you expressed yourself as unable to select, or not desirous of dictating who should be the members of the Committee; that you did suggest one name, viz., that of Mr. B. B. Comegys, which was instantly accepted by the Board, and that you further requested the Board to name some fit gentlemen to act as the Committee.

I am directed to say that the communication sent to you, suggesting the willingness of the Board to act as

part of the Committee, and proposing the names of Messrs. B. B. Comegys, Moses Taylor, Isaac Hinckley, Lindley Smyth, A. J. Drexel, and Thomas Smith, as other members of the Committee, was in response to your request that names should be suggested, was not intended in any manner to dictate as to the formation of the Committee, that the action of the Board was unanimous, that no members' views were overruled, as you suggest in "favor of the views expressed by President Gowen," and that you are greatly in error, in suggesting, to use your own language, that "the Board propose to resolve themselves into a Committee, with the addition of a few good names suggested by themselves." The idea of the Board was that the gentlemen named in its previous communication, would constitute a Committee representing all interests, and which, in accordance with a suggestion of which you approved, could be divided into separate Sub-Committees, representing each particular interest likely to be affected by its action. I am also requested to say, that while the Board thinks that Mr. Gowen should be a member of any Committee, the latter gentleman being one of the Receivers, had no intention of acting as part of the Committee, unless his Co-Receivers were also made part of the same. The Board desire me to assure you that they are earnestly anxious to co-operate with the London Committee, or with you, as its representative, or with any gentlemen interested in the Company's securities, you may desire to associate with you in an earnest endeavor to place the Company in good financial condition. They ask you to remember that among their number are gentlemen who have very large holdings in the lower classes

of the securities of the Company, and that, irrespective of their private interests, all of them are deeply impressed with the fact that their position as representatives of the shareholders, requires every sacrifice and every exertion on their part to preserve and protect the vast interests which have been committed to their charge. They cannot help expressing the opinion, that in their own judgment the management of the affairs of the Company may safely be left with the Receivers, who have been appointed by the Court, but, if you or the gentlemen whom you represent, prefer that an auxiliary Committee should be appointed, the Board is willing to defer to their wishes in this respect. Notwithstanding the belief of the Board, that all questions may safely be left to the control and management of the Receivers, they (the Board) have their own view and opinions as to the proper course to be pursued with reference to the financial condition of the Company, and they will be happy at any time you may desire it to confer fully with you about the future of the Company, and the plans they are considering for its relief. I am also directed to remind you that, with the exception of the previous reports of the London Committee, as yet you have neither presented to them any plans for the future, nor invited any expression of the opinions of those who have for so long a period been familiar with the affairs of the Company ; and the Board beg leave therefore with great respect to yourself, to suggest that if you do not approve of the course taken by them, you will suggest some other plan of your own, or of the London Committee.

Very respectfully,

(Signed), J. B. WHITE,

Secretary.

“COPY.”

Philadelphia, October 26, 1880.

TO FRANKLIN B. GOWEN, ESQ.,

President, and the Board of Managers
of the Philadelphia and Reading Railroad Co.

GENTLEMEN:—I beg to acknowledge the receipt of your letter of yesterday.

I find it difficult to gain a consistent apprehension of it, but I will try to make it the means of getting forward—to get it to lead to some practicable result.

First let me clear away some misapprehensions on your part; I am sorry if any indistinctness of mine has led to them.

I did not recommend Mr. Comegys: you pressed me to say if any names had been recommended to me; I said yes, I thought I could recall *one*—I could not recall it; you named two or more, one of which was Mr. Comegys; I said yes, that name has been mentioned to me (but the name I was trying to recall, I have since recalled, viz., Mr. Kennedy, so two names had been mentioned to me).

I strongly recommended a representative composition of Committee, but said that if I should come to the conclusion [or should find] a Committee of that sort hopeless [or unattainable] I would not say that I *would* refuse to meet a Committee otherwise formed; perhaps I should consent to confer with them (this statement you will perhaps recall when I remind you that I said in a jocular way, that I probably would not in such case, be sulky and refuse, etc).

This explanation corrects not only one, but several parts of your letter, based upon a quite different apprehension of what I said about conferring with any Committee not representative in my sense.

Notwithstanding your letter, I cannot dismiss from my remembrance the fact, that my theory of a representative Committee was ably supported by one, and approved by another member of your Board, during the discussion.

Now as to the Philadelphia Committee question, I contend for the sort of Committee desired by the London Committee, who sent me here, viz., that it shall be one fairly representing all interests—by which they mean, and I understood, one in which particular members will expressly represent particular classes of interest, and I expect that the classes will respectively select their representatives—and by *fairly representing*, I mean that there shall be a *due proportion* of representation of the respective classes.

My Committee contend for a Philadelphia Committee, to which the Board may contribute a proper proportion. Mr. Gowen first, and the managers since, have been contending for one, of which they are to be the substance.

The proper lines of constitution are inconsistent with a Committee list, in which the Board dominates.

Objection was made by the London Committee several weeks ago, to Mr. Gowen's list, with this fault in it. The written offer of the Board on the 20th, was still more open to the same objection, and it seemed to assume that I had already considered the attainment of a represen-

tative Committee to be hopeless, and surrendered myself to your wishes; but I certainly had not, nor have yet come to that despairing conclusion.

Such a Committee as I advocate ought to, and could, freely and without embarrassment, investigate, criticise, object, contest, and courageously discharge delicate and difficult duties, and they ought to review the past causes of present embarrassment without flinching.

I don't see how a Committee, including the Board, or dominated by the Board, could do all this.

That is, in one important aspect the issue I raise. And another aspect is that without thorough freedom of examination, and unembarrassed liberty of action, accompanied by a fair class representation, the outcome of a Committee's labors cannot be expected to be satisfactory either for the moment, or for permanency; nor satisfactory on all points of rearrangement, if even on any, nor to all interests, if even to any of them. Against that sort of representative Committee the Board still seems to argue and contend; but in your letter I come upon the following proposal, viz. :

"They cannot help expressing the opinion that in their own judgment the management of the affairs of the Company may safely be left with the Receivers who have been appointed by the Court; but, if you or the gentlemen whom you represent prefer that an auxiliary Committee should be appointed, the Board is willing to defer to their wishes in this respect."

Such a Committee has not been suggested by the London Committee or myself; whether desirable or not I do not now propose to discuss, as that would be getting away from the issue.

Pray do not imagine that I am opposing what you contend for, as to the importance of the very large creditor interest within the Board being represented on the Committee. Certainly, it ought to be represented. It is most important those gentlemen should be in full co-operation; but surely this may be done in some way or other without making the Board element in the Committee so dominant as has been so often proposed, and as often objected to, both in London and here.

In reply to your remarks, that I have offered no plan of rearrangement, and to your offer that I may consult with the Board, my reply is simple, viz., that I am intent on the formation of a fit Committee, and deliberately careful not to forestall their work; and that I am careful also, so long as I hope for the formation of such Committee, to contemplate it as the proper Board of Consultation.

I hope I have now made a clear exposition of what the London Committee desire, and of what I think necessary for making the examination of the situation thorough enough to produce the wisest arrangement and to insure the best results in the future; and now I ask for a simple answer, Whether the Board of Managers consent to, and will do their part towards the formation of, a representative Committee, as defined by me, or whether they adhere to the views which they have expressed to me in their letters of the 20th and of yesterday.

I remain,

Yours, obediently,

(Signed.)

T. W. POWELL.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,

General Office 227 South Fourth Street.

Philadelphia, October 28th, 1880.

THOMAS WILDE POWELL, ESQ.

DEAR SIR:—I am directed by the Board of Managers to acknowledge the receipt of your favor of the 26th instant, and to say that nothing which the Board or any of its members has ever done, written, or said will warrant the inference that they oppose the formation of a representative Committee or desired a preponderating influence upon it. The Board regret that on account of the absence of three of its members it has been impossible since the date of the receipt of your letter to have a full meeting, and they trust you will permit them to await the return of at least one or two of the absent members before making a fuller reply to your letter.

Very respectfully,

(Signed) J. B. WHITE,

Secretary pro tem.

“COPY.”

CONTINENTAL HOTEL, PHILADELPHIA.

October 29th, 1880.

J. B. WHITE, ESQ.,

Secretary of the Philadelphia and Reading Railroad Company.

DEAR SIR:—I beg to acknowledge receipt of your letter of yesterday. The assurance which it contains is, I confess, different from what I have understood from former communications. Reserving to myself the right of justifying my past conclusions from those communications, I will not here further allude to them, but, accepting your letter as indicating consent to the formation of a representative Committee, I shall be glad if, by waiting a few days longer, I can promote that object.

May I venture to express a hope that I may receive intimation of the Board's favorable action by Monday next.

I remain, yours respectfully,
(Signed) T. W. POWELL.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,

General Office 227 South Fourth Street.

Philadelphia, November 1, 1880.

THOMAS WILDE POWELL, ESQ.

DEAR SIR:—In reply to your favor of 29th inst., I would state that the Board of Managers had a meet-

ing of a few of its members on Saturday last, and expected to have been able to answer your letter to-day, as you requested, but that it has been found impossible to reply fully for two or three days.

Very respectfully,
 (Signed) J. B. WHITE,
Secretary pro tem.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,
 General Office 227 South Fourth Street.

Philadelphia, November 3d, 1880.

THOMAS WILDE POWELL, ESQ.

MY DEAR SIR:—I am directed by the Board of Managers to inform you that the Receivers of the Company and the Board have unanimously agreed upon the following gentlemen to act as an American Committee of creditors and stockholders of the Company, viz.: Mr. J. B. Lippincott, Mr. I. V. Williamson, Mr. Eckley B. Coxe, Mr. H. Pratt McKean, Mr. Moses Taylor (or a representative to be named by him), Mr. Charles H. Rogers, Mr. Isaac Hinckley, Mr. Frederick Fraley, Mr. Daniel R. Bennett, and Mr. Thomas Cochran.

The Board also request me to call your attention to the fact that you are quoted in one of the Philadelphia papers as stating that “if a satisfactory Committee is not formed foreclosure is the only effect you can see.” The Board are glad to learn from one of its members

with whom you have been in communication that you disclaim having made any such threat, and they trust you will see the propriety of their asking you to furnish them, over your own signature, with some evidence that you have been misrepresented.

Very respectfully,

(Signed) J. B. WHITE,
Secretary pro tem.

“COPY.”

CONTINENTAL HOTEL, PHILADELPHIA,

November 4th, 1880.

J. B. WHITE, ESQ., *Secretary*,
Philadelphia and Reading Railroad Company.

MY DEAR SIR:—I have the pleasure to acknowledge receipt of your letter of yesterday, on which I will consult with Mr. Bullitt as soon as he is at liberty—this morning he is otherwise engaged. The Committee proposed to me, as far as I can at the moment form an opinion, seems to afford hope of progress.

On the other matter, viz., that I am quoted in a Philadelphia paper as stating that “if a satisfactory Committee is not formed foreclosure is the only effect I can see,” I am glad to give you my assurance that I neither said or thought anything of the kind—*i. e.*, in the nature of a threat.

You may see in that report what I *authorized the reporter to say*—it was contained in two or three lines.

The rest of the article you allude to was a mixture of a little I said with a great deal I did not say. The reporter *did* ask me what would happen if the Board of Managers would not help to form a satisfactory Committee. Considering that he was only conversing and not further reporting, beyond what I had authorized, I answered that the parties holding the lower interests in Philadelphia were bound somehow, by Committee or otherwise, to get up some plan for disembarassing the Company; that the London Committee expected them to take a leading part in so doing, were anxious to co-operate with them, offered facilities and concessions and so forth; but if Philadelphia should entirely and finally neglect to respond to the offers and invitations of the London Committee, it would be like forcing the bondholders to their legal remedy.

I have explained thus fully that you may see how, by attempting to condense my *explanation*, the reporter very awkwardly gave it the appearance of, as you say, a threat. Every member of the London Committee, but none of them more earnestly than myself, has all along been, and now is, cordially wishful to give every reasonable facility and assistance to the stockholders and junior interests, to rescue the property, and put the finances on a safe basis.

Yours, respectfully,

(Signed) T. W. POWELL.

“COPY.”

CONTINENTAL HOTEL, PHILADELPHIA,

November 4, 1880.

J. B. WHITE, ESQ.,

Secretary Philadelphia and Reading Railroad Company.

MY DEAR SIR:—Referring to your letter of yesterday, which I acknowledged this morning, I have now further to say that, although I should have preferred, on abstract grounds, a Committee more definitely selected by the different classes in interest, I am prepared to confer with the Committee of the gentlemen selected and named by the Board of Managers, and to co-operate with them for the purposes set forth in the second report of the London Committee.

And I take the opportunity of expressing my hope that the outcome will be a safe and satisfactory adjustment of the Company's affairs.

I remain yours, respectfully,

(Signed) T. W. POWELL.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY,

General Office, 227 South Fourth Street.

Philadelphia, November 11, 1880.

THOMAS WILDE POWELL, ESQ.,

DEAR SIR:—The American Committee on the affairs of this Company will meet at 12 M., to-day, at this office, for the purpose of organization. I have no doubt they will be glad to see you, say, at about 12.30 P. M.

Respectfully yours,

(Signed)

J. B. WHITE,

Secretary pro tem.

B.—CORRESPONDENCE BETWEEN MR. THOMAS WILDE
POWELL AND MR. GOWEN.

“COPY.”

CONTINENTAL HOTEL.

14 *October*, 1880.

DEAR MR. GOWEN:—I have had some conversation to-day with Mr. Lewis and Mr. Caldwell. They told me you were away from the city on account of sickness.

If you have returned to the city, can I see you, either alone, or with them, as you may prefer?

Yours faithfully,

(Signed), T. W. POWELL.

Be good enough to reply to this, addressing me at Mr. Bullitt's office.

“COPY.”

E. M. Lewis,—F. B. Gowen,—S. A. Caldwell,—Receivers.

PHILADELPHIA & READING RAILROAD COMPANY.

General Office, 227 South Fourth Street.

Philadelphia, October 16, 1880.

T. W. POWELL, Esq.,

Care JOHN C. BULLITT, Esq.

MY DEAR SIR:—On my return to the office this morning, I find your note of 14th inst., and write to say

that I shall be very glad to see you at any hour this morning that it may suit your convenience to call at the office. As I have not been very well, I may probably leave for the day about 2 o'clock.

Very respectfully,

(Signed), F. B. GOWEN.

"COPY."

CONTINENTAL HOTEL, PHILA.,

3d November, 1880.

FRANKLIN B. GOWEN, ESQ.,

DEAR SIR:—I have received to-day a cable message from Messrs. McCalmonts, from which I understand that they absolutely refuse to support the Deferred Income Bond scheme, and they say they have asked you to discuss with me some practicable scheme of adjustment to which they can give cordial support.

I have purposely and carefully abstained from forming any plan before the Philadelphia Committee is formed and commencing its duties,—still I shall be glad to hear from you whether you have received a corresponding cable message from Messrs. McCalmonts, and whether, if so, you wish to see me about it.

Yours faithfully,

(Signed), T. W. POWELL.

“COPY.”

E. M. Lewis,—F. B. Gowen,—S. A. Caldwell,—Receivers.

PHILADELPHIA & READING RAILROAD COMPANY,

General Office, 227 South Fourth Street.

Philadelphia, November 5, 1880.

T. W. POWELL, ESQ.,

Continental Hotel, Philadelphia.

DEAR SIR :—I have yours of 3d inst., and regret that my absence in New York yesterday has prevented an earlier acknowledgment of its receipt. Upon receiving a telegraphic request from Messrs. McCalmont Bros. & Co. that I would consult with you, I replied that if you called upon me as a representative of the London Committee, or of Messrs. McCalmont Bros. & Co., I would gladly consult with you fully about the affairs of the Company. The next day I was advised that Messrs. McCalmont Bros. & Co. had cabled to you requesting you to call upon me with reference to the Company's affairs, and having thus recited the substance of the telegraphic communications, I have to say that I will be glad to see you at any time it may suit your convenience to call at the office of the Company, and that I am prepared to give to you all the information I possess about the affairs of the Company, and to consult with you as to its future. Meantime it is but proper to say to you that all the conditions required by the Receivers and the Board of Managers to be complied with by the proposed guarantors of the success of the issue of Deferred

Income Bonds have been accepted, and it is proposed to make the issue as soon as the proper papers can be signed, and the guarantee money deposited.

Very respectfully,
(Signed), F. B. GOWEN,
President.

“COPY.”

AT MR. BULLITT'S OFFICE, 32 S. THIRD ST.,

6th November, 1880.

F. B. GOWEN, ESQ.,

President Philadelphia and Reading Railroad Co.

DEAR SIR:—Being out yesterday evening, I did not receive your letter of yesterday till quite late. With the information you give me as to the forward condition of the Deferred Income Bond scheme, I see, and I infer that you take the same view, that it is too late to discuss any other financial scheme instead of it, as suggested by Messrs. McCalmonts' cable to me; and that was the only matter they asked me to see you upon.

I propose to defer any discussion of the general affairs of the Company till the Committee meet for business, as I presume that is likely to be within two or three days—as the summoning of their first meeting seems naturally to rest with you or your Board, I shall be glad to hear that it will be summoned as early as possible.

Yours, very respectfully,
(Signed.) T. W. POWELL.

“COPY.”

Edwin M. Lewis,—Franklin B. Gowen,—Stephen A. Caldwell,—Receivers.

PHILADELPHIA AND READING RAILROAD COMPANY.

General Office, 227 South Fourth Street.

Philadelphia, November 6, 1880.

THOMAS W. POWELL, ESQ.,

SIR:—I have yours of yesterday. I do not agree with you at all, but have no desire whatever to say or do anything to induce you to confer with me against your wishes, as I can assure you that it was only at the earnest request of Messrs. McCalmont Bros. & Co., that I agreed to confer with you about the Company's affairs.

The American Committee will be called together at the earliest day at which it will be convenient for its members to assemble.

Yours, etc.,

(Signed.) FRANKLIN B. GOWEN,
President.

“COPY.”

CONTINENTAL HOTEL,
8 Nov. 1880.

FRANKLIN B. GOWEN, ESQ.

DEAR SIR:—I received your last letter on Saturday night, but I don't understand how you quite differ from me.

Messrs. McCalmonts asked me to see you to discuss some plan *instead of* Mr. McEwen's deferred scheme;

you reply in effect that that scheme is settled and pretty safe to go forwards. How can we discuss other plans instead of it?

Yours, respectfully,
(Signed) T. W. POWELL.

“COPY.”

CONTINENTAL HOTEL, PHILAD'A,
9th November, 1880.

FRANKLIN B. GOWEN, ESQ.

DEAR SIR:—Referring to your letter of the 6th, in which you say that the American Committee will be called together at the earliest day at which it will be convenient for its members to assemble, may I venture to remind you that this Committee has been asked for by the London Committee for several months past, and that I am only expressing their wishes in pressing for an early meeting.

I am at the service of the new Committee at any hour, but I shall accept it as a politeness, with a view to the disposal of my time, if you will take the trouble to let me know what answer has been received from the members of the Committee, as to when it will be convenient for them to meet; and whether, in view of the delays that have already ensued, you will not call a meeting, at an early day, in order that an organization, at least, may be effected and some progress made. I cannot doubt that if you would inform the members of the Committee, that I am awaiting their pleasure, and ex-

pecting a conference, they would, even at some inconvenience to themselves, give me a meeting some day this week.

Yours, respectfully,

(Signed) T. W. POWELL.

“COPY.”

E. M. Lewis,—F. B. Gowen,—S. A. Caldwell,—Receivers.

PHILADELPHIA & READING RAILROAD COMPANY,

General Office, 227 South Fourth Street.

Philadelphia, November 9, 1880.

THOMAS WILDE POWELL, ESQ.

SIR:—I have your favors of yesterday and to-day. I differ with you as to the construction you place upon Messrs. McCalmont Bros. & Co.'s expressed desire, that you and I should discuss the affairs of the Company, and I differ entirely with you upon the propriety or politeness of your expressed determination to ignore the officers of the Company. This is only written in answer to your inquiry as to how we differed. In answer to your letter of this date, I have to say that the first meeting of the American Committee will be held on Thursday next, and that I will see that your letter of yesterday to me is laid before them.

Very truly, &c.,

(Signed), F. B. GOWEN,

President.

Philadelphia, November 11, 1880.

F. B. GOWEN, ESQ., *Philadelphia.*

DEAR SIR:—There is a matter which I had supposed would, in due course, come before the consideration of the Philadelphia Committee on Philadelphia & Reading matters, but the action of the Committee to-day, in adjourning till the issue of the Deferred Bond scheme shall be known, and the opinion which seemed to be to some extent entertained, that if that scheme were successful the Committee would have little or nothing to do, make it necessary for me to address you this communication, to avoid further delay.

When you were in London, in 1877, in one of the conversations before the day of the public meeting, an inquiry was made of you, because of some suggestions in the newspapers, as to the perfect purity of the directors and officers of the company, in respect to the sales of coal lands; you replied that there was one case in which a director had been interested in the lands sold, but there could be no possible imputation of any impropriety of conduct in that case, because the property in question was such an excellent purchase, and had proved so profitable to the company. On the strength of that, I was enabled in my opening speech at the meeting to use very strong language in testifying to the entire freedom of the directors and officers from the possibility of any imputation (see my precise words in the report of the meeting, embodied in your annual report of January, 1878; see also, in the same report, your own denial of any, the slightest jobbery, in the purchase of coal lands).

Now, I am obliged to tell you that within the last week or ten days I have heard in Philadelphia things quite contrary to all this, and that I feel it absolutely necessary to ascertain the truth of the rumors that I have heard respecting the "Tamaqua Lands."

The following is an outline of what I have heard, put broadly, and I submit it to you, with the request that you will say whether or not there is any serious mistake in the impressions which I have received. Is my statement fairly correct, or is it seriously wrong?

In the first place, I find that your explanation as to the innocence of a Director who was a small owner in certain *good* lands, is consistent with what I hear (except that there were two Directors) in respect of a small interest in the "*Mahanoy Lands*;" but now I have collected from so much evidence as to convey the appearance of truth, the following circumstances:

Mr. Borie and Mr. McKean (brothers-in-law and partners), being then one or both in the Direction of the Little Schuylkill Company, joined a syndicate of seven, which bought the "Tamaqua" tract for bonds between \$600,000 and \$650,000; that they also bought another tract adjoining ("The Tuscarora") for about \$200,000; that the syndicate held the lands from three to five years, and spent considerable money upon them, but with results very disappointing, probably with considerable loss. That the disappointment in the result of this purchase was pretty widely known in Philadelphia, and that the tract was called the "White Elephant" (the name, I heard, having been given to it by one of the syndicate); that the syndicate

still including those gentlemen sold both tracts to the Reading Company, of which they too were Directors, for \$2,250,000, and made a large profit (with interest at 7 per cent. compounded at 6 per cent. the cost to the Company at this date amounted to \$3,500,000). The purchase has, I believe, been absolutely unprofitable to the Company.

Mr. Harris has condemned the lands in his report, as not worth the remaining encumbrances, and values them at about \$1,300,000 (but the exact figures I can get from the Report itself).

First, Then I have to ask whether there is any material misstatement in this summary? *Secondly*, Did you know that state of affairs when you were in England in 1877? In your answer to this second question depends very much what amount of blame I have to attribute to you personally.

If the statement is substantially correct, I can understand the object that poor George McHenry had in view when he was striving to get me to listen to what I guessed to be mere slanders, and refused to listen to; but now that I have the information upon testimony which I can scarcely doubt, I shall, unless you can show me that I am in mistake, feel bound to publish my recantation of what I said on the faith of your assurance.

If I do not hear from you by Saturday, stating the particulars in which you may say this statement is incorrect (if in any), I shall assume that it is correct, and unless you disavow it, I shall assume that you knew the facts at the time of the bondholders' meeting.

Yours respectfully,
(Signed), T. W. POWELL.

“COPY.”

PHILADELPHIA AND READING RAILROAD COMPANY,
General Office, 227 South Fourth Street.

Philadelphia, November 12, 1880.

THOMAS WILDE POWELL, ESQ.,

SIR:—I have your letter of yesterday, and whilst its language and inferences leave me at perfect liberty, if I choose, to decline to reply to it, or to have any further communication with you, I have to say :

First.—That Mr. McKean and Mr. A. E. Borie had together, I believe, one-sixth interest in the Tamaqua lands. That neither of the gentlemen took any part whatever in the sale of the lands to the Company. That the large majority interest in the lands was held by the gentlemen with whom I negotiated the purchase, nearly all of whom had affiliations with a rival line of railway that it was important to keep out of our territory. That we bought the land at the rate of \$479 per acre about the time when a rival corporation bought the adjoining tract at from \$1,000 to \$1,200 per acre. That the Tamaqua tract according even to Mr. Harris' report (which estimates the amount of coal to be sent to market from any tract, at but 27½ per cent. of the total contents) contains 68,110,000 tons which can be sent to market, or more than 50 per cent. in excess of the amount contained in the Philadelphia and Mahanoy tract, which latter Mr. Harris estimates to be worth at present \$3,189,877. That the real intrinsic value of the Tamaqua lands, owing to their deep basins, to the large quantity of coal contained in them,

and the fact that they are nearer to market than any of the Mahanoy lands, is at least five millions of dollars. That it would have been the height of suicidal folly for the Company, through any sentiment due to the fact that two of its directors were interested, to have permitted these lands to drift into adverse ownership and thus open the entire Schuylkill Valley coal-field of which they are the key to the incursions of a rival line. That the low value given to the Tamaqua lands by Mr. Harris, is due to his novel theory of charging all lands which the Company does not work with eight per cent. compound interest upon their value, up to the period at which it may suit the Company's convenience to work them, and thus to accumulate an enormous and overwhelming load of bookkeeping debt, against a tract which may not be worked for ten or twenty years. That when we bought the Tamaqua lands, they were developed by three or four collieries, and had the Company continued to work these collieries, and in addition thereto, expended upon the Tamaqua lands the same amount of money that it expended upon the Mahanoy lands, the former would now be producing such a tonnage as would, according to Mr. Harris's system of computation of value, make them worth many millions of dollars. That, as the Company bought many more lands than were necessary to supply it with tonnage for some years to come, and as the demand for coal was not sufficient to take anything like the production, even of the collieries existing at the time of the purchase, it became necessary for the Company to dismantle and close up a great many collieries. That the question of which should be closed, and which be con-

tinued, was one entirely for the Company to decide. That in making this decision, the former owners were in no manner consulted, and nothing can therefore be more unjust and preposterous than to make one tract containing double the quantity of coal which another does, worth less than the latter, because since the date of purchase, and without any consultation with or control by the former owners, the Company, for its own purposes, has chosen to let one remain idle, and to expend a large amount of money in developing and working the other.

Thus far, I have restrained myself sufficiently, to answer as much of your letter pertaining to the business of the Company, as it is at all necessary to reply to, and now I have to say to you:

First. That from past experience and knowledge, you are entirely incompetent to form any correct judgment upon such a question as the value of coal lands.

Second. That your real position as a confidential agent of the Pennsylvania Railroad Company makes it highly indelicate and improper for you to attempt to inject yourself into the affairs of the Philadelphia and Reading Railroad Company.

Third.—That your statement that you have but lately learned about the transactions connected with the purchase of the Tamaqua lands, or that I, at any time or in any place, by thought, word, or deed, ever conveyed or attempted to convey to you or to anybody any impression concerning the same that was not strictly true, is infamously false.

Fourth.—That Mr. Henry Pratt McKean is still living and thoroughly able to defend his own character, as a gentleman and a man of integrity, from any possible assault which you can make upon it. My poor friend, Mr. Adolph E. Borie, is indeed dead, but I can assure you that any effort to tarnish his character will but recoil upon you, if you dare to make the attempt, as all his friends in America can look back upon his life in the most perfect confidence that his reputation as a man of honor is absolutely safe from the mendacity and malignity of any such person as yourself.

Fifth.—Any other communication received by me from you will be returned unopened.

Respectfully yours,

(Signed) FRANKLIN B. GOWEN.

REPORT
OF
JOSEPH S. HARRIS, Esq.,
UPON
THE COAL LANDS
OF THE
PHILADELPHIA & READING COAL & IRON CO.
1880.

PHILADELPHIA:
JACKSON BROS., PRINTERS, Nos. 400 & 402 LIBRARY STREET.
1880.

REPORT.

E. M. LEWIS, F. B. GOWEN, S. A. CALDWELL,
Receivers Philadelphia and Reading Coal and Iron Co.

GENTLEMEN:—In accordance with your instructions of June 17, 1880, I submit herewith “a report upon the condition, value, capacity for production, and present or future earning power of the coal lands and colliery property of the Philadelphia and Reading Coal and Iron Company.”

This Company has acquired within the last ten years, and mostly in the years from 1871 to 1874, an estate situated in Schuylkill, Columbia, Northumberland, and Dauphin Counties, and lying for the most part within the limits of that great deposit of coal, known as the anthracite field of the State of Pennsylvania. Of the three great regions into which the anthracite field is divided, the Schuylkill, the Lehigh, and the Wyoming, this estate lies wholly in the former, of which it constitutes the larger part.

For convenience of description, the Schuylkill region will, in this report, be divided into four districts; the territory north of the Broad Mountain constituting the Shamokin and Mahanoy districts, their common boundary being the line of the Locust Mountain as far east as the town of Centralia, and thence turning northward along the water-shed, between the waters of the Shamokin and Mahanoy Creeks; and that south of the Broad Mountain and west of the Little Schuylkill River at Tamaqua, forming the Pottsville and Tremont districts; divided by a northwesterly and southeasterly line,

REPORT.

E. M. LEWIS, F. B. GOWEN, S. A. CALDWELL,
Receivers Philadelphia and Reading Coal and Iron Co.

GENTLEMEN:—In accordance with your instructions of June 17, 1880, I submit herewith “a report upon the condition, value, capacity for production, and present or future earning power of the coal lands and colliery property of the Philadelphia and Reading Coal and Iron Company.”

This Company has acquired within the last ten years, and mostly in the years from 1871 to 1874, an estate situated in Schuylkill, Columbia, Northumberland, and Dauphin Counties, and lying for the most part within the limits of that great deposit of coal, known as the anthracite field of the State of Pennsylvania. Of the three great regions into which the anthracite field is divided, the Schuylkill, the Lehigh, and and the Wyoming, this estate lies wholly in the former, of which it constitutes the larger part.

For convenience of description, the Schuylkill region will, in this report, be divided into four districts; the territory north of the Broad Mountain constituting the Shamokin and Mahanoy districts, their common boundary being the line of the Locust Mountain as far east as the town of Centralia, and thence turning northward along the water-shed, between the waters of the Shamokin and Mahanoy Creeks; and that south of the Broad Mountain and west of the Little Schuylkill River at Tamaqua, forming the Pottsville and Tremont districts; divided by a northwesterly and southeasterly line,

between the waters flowing into the west branch of the Schuylkill River and those tributary to the Swatara Creek. The territory east of Tamaqua, belonging to the Lehigh Coal and Navigation Company, will, as usual, be included in the Lehigh region.

The Company's estate contains 160,566 acres, or 251 square miles of land, of which 69,417 acres are classed as probably containing no workable coal, 46,627 acres as containing only the coals underlying the Mammoth seam, 26,253 acres as containing the Mammoth and the underlying seams, and 18,269 acres as containing, with the seams last named, the overlying white ash and the red ash seams.

It would take much space and be of little use to give a detailed description of all these seams or "veins," for the same vein varies in different localities so greatly in thickness and quality of coal, that none but a very general statement could be made. It may suffice to say that the lowest beds of the series are the Lykens Valley Veins, which are found in workable condition throughout the Tremont and in the larger part of the Shamokin districts, and in the western end of the Mahanoy district; there being reason to think that they can be worked in this locality as far east as Locust Summit. In the Mahanoy and Shamokin districts, there are two of these veins whose average thickness of workable coal may be stated at seven feet, while in the Tremont district there is usually thirteen feet of good coal in two veins; though over a limited area, near Lincoln Colliery, they contain twenty feet of workable coal in four veins. The other veins below the Mammoth are usually rather rough, hard coals; though at some points in the Mahanoy district, the Buck Mountain Vein, which is the principal one in this series, approaches in quality the Mammoth Vein. As a class, however, these coals have slightly less carbon and more ash than the Mammoth Vein, though analysis shows them to have as high an average

heating power. They are all classed as white ash coals. Taken as a series, they vary in thickness from a maximum of twenty-six feet, near Mahanoy City, to an average of about seven feet throughout the Pottsville district. They are however to a great extent undeveloped, and therefore not accurately known, on account of their great depth from the surface.

The Mammoth Vein is the greatest bed of the whole series, and has thus far produced throughout the anthracite field much more coal than all the other veins combined. Its quality—except where, by local geological disturbances, it has been thrown out of its normal condition—is uniformly good, and its chief variation is in its hardness, which reaches its maximum at the eastern end of the Mahanoy district, and its minimum at the western end of the Shamokin district. In thickness this bed varies from forty-five feet in the centre of the Mahanoy district, to about fourteen feet, which is its size in the western ends of the Shamokin and the Pottsville districts. It burns to a white ash, except in the western end of the Tremont district, where the ash inclines to redness.

The veins overlying the Mammoth, with the exception of the two lowest ones, are red ash veins, of thicknesses varying from three to nine feet. They are most numerous and valuable in the Pottsville district, where they have an aggregate thickness of twenty-seven feet of workable coal, but they are also found to a considerable extent in the eastern part of the Mahanoy district.

According to their physical characteristics, the coals of this estate are divided into—

1. *Hard white ash coal.*—This coal is produced in the Mahanoy district, east of the town of Ashland. It comes principally from the Mammoth Vein, but the Buck Mountain, Skidmore, and Seven Feet Veins also furnish part of it.

It is in great request for blast furnace and locomotive purposes, having, to an unusual degree, the qualities of resisting change of form under high heat and pressure, and, owing to its high percentage of carbon, it is valuable for producing steam; but for domestic use on a small scale, and for open grate fires, it does not ignite readily enough to be a favorite. It furnishes about fifty-one per cent. of the total of the company's product, and is now, and is likely to remain, one of their most salable and most valuable coals.

2. *Free-burning white ash coal.*—This variety is produced in the Mahanoy district west of Ashland, in the Pottsville district, and in the Shamokin district as far west as the meridian of Locust Gap. The distinction between it and the hard-burning white ash coal is, that under such a fire as is ordinarily used for smelting metals or producing steam, the impurities melt or clinker, which is not the case with the harder coal. This practical test is not, however, a very exact one. Some of the anthracites can be clinkered with a strong draft and with a thick bed of fire, and would, by a person who used them under such circumstances, be classed as free-burning, while another, whose method of burning coal was more economical, would call them hard. Analysis shows that the free-burning white ash coals are quite as rich in fixed carbon, and that they have even higher heating power, as tested by the amount of water evaporated, than the harder variety, but their limited range of usefulness, which is due to their clinkering, prevents their price rising as high as the hard white ash coals. They are mined from the Mammoth and underlying veins, and constitute about twenty-eight per cent. of the Company's product. For export from Port Richmond and Elizabethport, free-burning coals sell a little lower than hard coals, the broken and egg sizes bringing twenty-five cents less per ton, and

the other sizes being sold at the same rates as the hard coals. Along the line of the Reading Railroad, the free-burning and hard coals are equal in price. The former is used extensively for blast furnace purposes, in localities reached by the Reading Railroad lines, but no lump coal of this grade is shipped from the seaports, Port Richmond and Elizabethport, the markets reached by the sea-going coal preferring the hard coals, which approach in character the Mammoth Vein coal of the Lehigh region.

3. *North Franklin white ash coal*.—This variety of Mammoth Vein coal is mined only on the Trevorton estate, at the western end of the Shamokin district. The coal is pure, but its heating properties are rather low, and it is of so friable a nature that it does not stand transportation well. The demand for it is therefore but limited, and it furnishes only two per cent. of the Company's total product.

4. *Schuylkill red ash coal*.—For this coal there was some years ago a great demand in New York and Eastern markets. It is easily ignited, easy to keep burning, and where used in open grates makes less floating dust than white ash coal, because its ash is composed of larger particles, and on account of the oxide of iron, which constitutes its coloring matter, has greater specific gravity than the ash of the white ash coal. It was therefore greatly in use for all domestic purposes where small quantities of coal were burned, and the reason of its being now in decreased request is partly that its place has been taken by the still freer burning coals of Lorberry and Brookside, and the Franklin coals, which can be more cheaply mined, and partly because, as it burns rapidly, it is not considered as economical for domestic use as the slower burning coals. It will doubtless come into use again to a large extent, as the coals which have supplanted it are limited in quantity, but at present it furnishes but two

per cent. of the Company's production, selling for about the same price as hard white ash coal. It is now produced only at the Pottsville Shafts Colliery and the two Phoenix Park Collieries in the Pottsville district and comes entirely from the higher beds of coal; the Orchard, which is the third vein above the Mammoth, being the lowest true red ash vein, though the next lower one—the Primrose—a pink ash vein—is sometimes so classed.

5. *Shamokin coal*.—All white ash coal from the Company's lands in the Shamokin district, between the meridian of Locust Gap and the east line of the Trevorton lands, is known as Shamokin coal. It comes mostly from the Mammoth Vein, follows in hardness and in ease of ignition next after the free-burning white ash coals, and is used still more specially for domestic purposes, its lower percentage of carbon making it ill adapted for purposes requiring intense heat. This coal finds mostly an eastern and southern market, not being largely used along the line of the Philadelphia and Reading Railroad. Egg and stove sizes bring a somewhat smaller price than the corresponding hard white ash coals, but the other sizes are on a par with them. Four per cent. of the Company's production belongs to this grade.

6. *Lorberry coal*.—This coal is mined by the Company only in the Tremont district at Colket and East Franklin Collieries. It burns with a little flame, and is much in request for domestic uses in the eastern markets. It is produced from the Mammoth Vein and the next overlying veins, and ranges in price a little above the hard white ash coal. It forms three per cent. of the Company's production.

7. *Lykens Valley coal (Brookside)*.—This coal comes from the Lykens Valley Veins, and is mined at present at but one of the Company's collieries, the West Brookside. It burns

with considerable flame, and is greatly liked in the eastern market for open grates, other domestic uses, and for steam and heating purposes, wherever quick heat is required. It ranges in price about half-a-dollar per ton above hard white ash coal, and is by far the most profitable of the Company's coals, being the most cheaply mined and the highest priced of all of them. It furnishes ten per cent. of the coal sent to market by the Company.

This general description, from which are omitted some of the minor varieties of coal not at present mined, such as the Shamokin red ash and the Lykens Valley red ash (North Franklin), shows that the Company can furnish from its own lands every grade of anthracite from the hardest to the freest burning, thus meeting competition in every quality of coal.

As the coal estate is unrivalled in its size, in its coal content, and in the variety of its products, so is it in the completeness of the arrangements for marketing its coal.

Of the 1,775 miles of railroad track owned and controlled by the Philadelphia and Reading Railroad Company, 441 miles, or about one-fourth, lies within the Schuylkill region, being nearly two miles of track for each of the 238 square miles of coal territory in this district. About sixty per cent. of the remaining mileage of this great system of roads, and the whole of the 153 miles of the canal system controlled by the Philadelphia and Reading Railroad Company, are available to distribute the product of the Company's collieries to nearly every part of the great manufacturing district lying between the Lehigh and Delaware River on the north and east, and the southern boundary of Pennsylvania and the Susquehanna River on the south and west,—one of the most populous districts in America, and one of the greatest manufacturing regions in the world. This magnificent home market consumes about three-eighths of the coal mined by the

Company, and the whole of the seaboard market is accessible by the Railroad Company's steam colliers, which take the coal from the ports of Philadelphia and New York, where that Company's railroad lines deliver it; while many of the less exposed waters are also traversed by the smaller boats which are loaded at the head of navigation of the canals, and deliver their products at the wharves of the manufacturing cities without further handling.

This estate is much the largest body of anthracite lands in the State under one ownership, and as all the thoroughly developed beds of anthracite in the United States are within the limits of Pennsylvania, it will at once be seen that the Company's position as a producer of anthracite is unique and unapproachable. The area underlaid by this coal in Pennsylvania is 483 square miles, of which area the Company owns or controls 91,149 acres, or 142 square miles, being nearly 30 per cent. of the whole. Its share of the coal that may be mined is not so easily estimated, as the thickness of the different beds of coal varies so greatly throughout the anthracite field that it is difficult to get reliable averages. There are in general more beds and a greater aggregate thickness of coal in the Schuylkill region, in which the Company's estate is situated, than in the Lehigh and the Wyoming regions; but on the other hand the coal in the two last named is at more accessible depths, and geological changes have there disturbed the position and injured the quality of the coal less than in the Schuylkill region.

From the best existing data, I estimate that the anthracite in Pennsylvania is distributed as follows:

A.—*Statement showing the estimated production of Pennsylvania anthracite.*

Region.	District.	Anthracite production.			Company's estate		Comp'y's interest.	
		Area.	Thick.		Area.		Area.	
		a.	b.	a x b.	a.	a x b.	a.	a x b.
		sq. m.	ft.		sq. m.		sq. m.	
Schuylkill.....	Tremont I...	16.4	12	196.8	16.4	196.8	16.4	196.8
	Tremont II..	45.4	34	1543.6	36.4	1237.6	35.0	1190.0
	Pottsville.....	84.3	42	3540.6	48.2	2024.4	46.1	1936.2
	Mahanoy	40.0	41	1640.0	18.7	766.7	18.4	754.4
	Shamokin....	52.0	22	1144.0	22.7	489.4	19.3	424.6
Lehigh.....	Lehigh I....	12.9	42	541.8				
	Lehigh II...	38.0	15	570.0				
Wyoming.....	Wyoming ...	94.3	30	2829.0				
	Lackawanna	99.7	20	1994.0				
Totals.....		483.0		13999.8	142.4	4724.9	135.2	4502.0

From which statement it appears that taking as the unit of cubic measurement one square mile of coal of the thickness of one foot, the anthracite field contains $13999\frac{8}{10}$ of such units, of which the estate controlled by the Company contains $4724\frac{9}{10}$; but as the Company is not the sole owner of the estate, its interest is 4502.0 of these units. The production of coal will then be as follows: from the Schuylkill region $57\frac{6}{10}$ per cent, from the Lehigh region $7\frac{9}{10}$ per cent., and from the Wyoming region $34\frac{5}{10}$ per cent. The estate of the Company will produce $33\frac{7}{10}$ per cent, and the Company's interest in that estate will be $32\frac{2}{10}$ per cent. of all the anthracite in Pennsylvania.

The "thickness of coal" in Statement A, which is the aggregate of workable coal in the different beds, is less than has been generally assumed, but while in certain parts of each district it will amount to more than the figures given, they

are high enough when the coal is considered as evenly spread over the whole area, and after the coal already mined is subtracted.

The subject of the actual content of coal in the Company's lands is one which has been very carefully studied by different persons in the past few years, and a good estimate can now be made of the amount that may be sent to market from the estate. A very elaborate calculation of the coal content was completed in 1876 by Henry Pleasants, the late Chief Engineer of the Company. From data which, in the undeveloped portions of the property, were obtained by thorough explorations by trial shafting, and in that part of the estate where the mines had been worked, from the knowledge gained by mining, a number of geological cross-sections were drawn. Using these cross-sections and the known areas underlaid by the different seams of coal, detailed calculations of content were made with great care, and the highest accuracy attainable; and, as the result of the investigation, Mr. Pleasants reported that the Company's estate contained 4,476,000,000 tons of coal. In July, 1879, I prepared a report on the probable duration of the Pennsylvania anthracite supply, in which, from independent data, I estimated that 1,189,000,000 tons of coal could be shipped from the Reading Company's estate.

Within the last few months the Company's engineers have again investigated the subject, in a new manner, and from data not heretofore used. From the actual shipments of a number of the older collieries they have found how much coal several of the leading veins on the estate can be expected to yield per acre. From this the yield of each of the veins has been deduced, and, knowing the limits underlaid by each vein, the total content of the estate has been readily computed. This estimate gives 1,208,254,000 tons as the amount that the estate should yield. This quantity

agrees closely with that reported by me, as quoted above; but as mine was but a good general estimate, and this was derived from a much more careful computation, I have adopted it as being the best attainable result. Comparing it with Mr. Pleasant's estimate of the content of the lands, it gives the result that about 27 per cent. of the coal existing in the lands can be sent to market. There is a reasonable agreement between these estimates of content and possible shipment, as may be inferred from the experience of the Lehigh Coal and Navigation Company, which Company has for sixty years mined in the territory east of the limits of and adjoining the Schuylkill district. From an area which is computed to have originally contained 52,266,000 tons of coal, that Company has shipped 18,100,000 tons, or $34\frac{6}{10}$ per cent.; and it is estimated that when the coal within that area shall be entirely exhausted, the shipment will have been 20,240,000 tons, or $38\frac{7}{10}$ per cent. of the original content. This unusually favorable result has been made possible by the coal being mined at comparatively small depths, and at considerable inclinations,—the latter cause much increasing the yield per acre,—and by its having been very thoroughly worked. Taking into consideration the differing circumstances, it is a fair inference that 27 per cent. represents well the proportion between shipment and content on the whole of the Reading Company's estate.

Taking the total content of the Company's estate, as above stated, at 1,208,254,000 tons, we have as the value of one of the units of statement A, or in other words, as the product of a body of coal one square mile in extent and one foot in thickness, 1,208,254,000 divided by 4,724.9 = 255,721 tons per square mile, or 400 tons per acre, one foot thick. We have also:

B.—*Statement showing the estimated product of each region.*

	Products.	Percentage.
Total anthracite field.....	3,580,036,000	100.00
Schuylkill region.....	2,062,386,000	57.61
Lehigh region.....	284,310,000	7.94
Wyoming region.....	1,233,340,000	34.45
Company's estate..	,208,254,000	33.75
Company's interest	1,151,254,000	32.15

The Company's estate has a certain easily estimated value on account of the timber growing upon it, all of which will very soon be used for mining purposes, and for the erection and repair of buildings. Another element of value that involves no difficulty, is that derivable from town lots and farm lands. The remaining, and much the greatest value belongs to the coal; and this being much more difficult of estimation, the method employed will require an extended explanation.

We may as well dismiss from our minds at once the idea that such an estate has or can have a market value. No purchaser could be found for so vast a property as a whole; and if it were broken up into tracts, a long period would be needed to dispose of it, and the price of the separate tracts would fluctuate so greatly in value with the dullness or briskness of the coal trade, that there cannot be said to be any market value to these coal lands.

Their true value is undoubtedly a factor of the tonnage of coal they can produce, but the relation between the two is not an easy one to find. It depends on the cost of mining, and the value of coal when mined; and though we can over a large estate assume averages of costs and value that will

be satisfactory, there is another still more important element to be considered,—the time when the value can be realized. These two subjects, then, 1. The rate at which the estate can be made to yield, and 2. The profit that can be realized on mining, will need to be carefully investigated.

I.—*The rate at which the estate can be made to yield.*

This is a question involving to a great extent the growth of the industries of the region where anthracite is to be used in manufactures, of the population in the still wider region where it is to come into service as a domestic fuel, and of the railway and other systems of transportation by which its carriage is to be cheapened, and the area extended through which it can be economically used. We have no safe guide in estimating the future except the experience of the past carefully employed, and I have therefore endeavored to deduce from the published statements of the history of the anthracite trade, the law of growth of the demand for this fuel. I say the demand, rather than the production, because the many speculative elements which largely affect the latter, act with less force on the former, which therefore fluctuates less wildly, and more easily discloses upon investigation the law of its increase. In deducing the demand from the production, I have reasoned as follows :

Let us assume that when the supply of coal and the demand for it are at any time fairly adjusted to each other, there will be at the commencement of the active season 1,000,000 tons of coal that has been sent from the mines, but remains undelivered to the consumers, this being under the assumption the normal working stock on hand. Under the good demand that will spring up with general business prosperity, and but a moderate supply of coal unsold, the producers, knowing that both mining and transportation are cheapened by increasing tonnage, will stimulate the production of working collieries, and make

new openings to keep up the supply; the production will begin to draw ahead of the demand, stocks will accumulate, and the season will close with, say 2,000,000 tons ahead. The market will then begin to flag, the reasons for stimulating production having ceased; but as each Company wishes that its neighbors and not itself should restrict, each desiring by keeping at work to realize on the heavy expenditure for improvements and equipments already made to meet the expected increased demand for coal, the movement goes on by its own momentum, till a third year finds 3,000,000 tons of unsold coal on the market. The price now breaks badly, the private shippers can no longer work at a profit, and begin to close their collieries or sell them, the Companies commence to curtail, and restriction is the rule until the stock of coal falls by the fifth year to the natural working surplus of 1,000,000 tons.

This statement is of course ideal and never exactly realized in practice, but it is near enough the truth to suggest that in making a table of anthracite demand, we should find it more regular, and would be nearer the truth, if we were to take for each year's demand the mean of that year's shipment combined with the two preceding and the two succeeding years, thus eliminating the irregularities of alternate excessive and deficient production, caused in the manner just stated.

Statement C submitted with this report (*see appendix*) shows the shipments for each year from 1832 to 1882, those for 1880, 1881, and 1882 being estimated to bring the demand down to 1880; the demand (obtained as above explained); the ratio of change from year to year for each of the three anthracite regions, and the total for the whole anthracite field; and the accompanying diagram D (*see appendix*) represents the percentages of change by profile lines, in which for greater distinctness of vision, the vertical scale is enlarged to twice its natural size. The first

profile shows for the whole anthracite field the ratios of change in the shipments, and it will be seen from the irregularities of this line how difficult it would be to deduce the ratio of change if the problem were treated in this way. The second profile, in which the fluctuations are much less violent, shows for the whole field the ratio of the yearly changes in the demand, the demands being taken from statement C; and the next three profiles show the ratios of change in the demand for the three regions. Then follows a profile in which the variation in the demand for the whole field is estimated to the year 1930. No attempt is made on this diagram to carry the demands for the different regions into the future, because their fluctuations are local, and less subject to ascertainable laws than the total demand. One region may have its trade temporarily interrupted, but its customers will be supplied from the other regions, and the total will show no disturbance. The black lines in each of the first five profiles represent the results derived from statement C, and the red lines are average lines which represent the rate of increase. It is worthy of note, how closely in the profile of the demand for the total anthracite field the depressions and elevations in the black line coincide with similar fluctuations in the general business of the country. The first depression extending from 1839 to 1844, shows the result of the crash of 1837; from 1844 to 1848 the elevation coincides with years of prosperity; from 1852 to 1857 again shows a prosperous era; from 1859 to 1865 the depression shows the stagnation following the revulsion of 1857, and lasting through the war; from 1870 to 1875, a period of great business activity is represented by an elevation, but the depression corresponding to the period of stagnation in business from which we are just emerging is not shown to be very great, possibly because we cannot tell to what point the line of rate of increase in demand will rise for 1881 and 1882. Disregarding the region profiles we find

that from 1832 to 1852 the demand compounded at the rate of $14\frac{3}{10}$ per cent. per annum; from 1852 to 1872, at the rate of $6\frac{5}{10}$ per cent., and from 1872 to 1880, at the rate of $4\frac{1}{10}$ per cent. For a few years in the future we may expect the increase to follow the same general law, the percentage of increase slowly diminishing; but before many years the increased cost due to deeper mining will begin to put anthracite at a disadvantage as compared with bituminous, and some of the regions will begin to be exhausted. These causes will interfere with the natural increase of the demand, and the output will pass its maximum near the close of the century, and thence commence to decline. These changes I estimate as follows:

E.—*Estimate of the anthracite shipments from 1880 to 1930.*

[NOTE.—Quantities are all stated in thousands of tons.]

Year.	Ratio of increase.	Ratio compounded for 10 years.	Shipments whole field.	Shipment from regions.			Shipments from Company's estate.	
				Wyoming.	Lehigh.	Schuylkill.	Total.	Percentage of Schuylkill region.
1880.....	+0.03	1.344	23,630	11,484	4,157	7,989	4,300	53.8
1890.....	+0.010	1.105	31,759	16,500	3,895	11,364	5,620	49.5
1900.....	+0.005	1.052	35,094	17,000	3,000	15,094	9,338	61.9
1910.....	.00	.00	36,919	16,000	2,500	18,419	12,607	68.4
1920.....	—0.005	1.052	36,919	15,000	2,000	19,919	13,158	66.0
1930.....	—0.015	1.161	35,094	13,500	1,500	20,094	13,366	66.5

The tonnages are spoken of as shipments here because the demand, which would keep on increasing, is, after 1910, interfered with by the inability of the anthracite field to maintain production, which thereafter is limited by what can be shipped. In this statement the maximum annual shipment from the whole field is placed at about thirty-seven millions of tons, and the culminating point at about the year 1915.

The Lehigh Region is estimated to pass its maximum in the next decade, and thence to decline steadily in shipments. The Wyoming Region is estimated to reach its maximum in about twenty years, and the Schuylkill Region in about fifty years. The Company's estate should attain its greatest development about the same time, its largest annual output being placed at about 13,360,000 tons, at which figure it will stand for about thirty years, and from which it will fall off at about the same rate it rose, till 1990, after which time no estimate is made of the product of the estate. The estimate of the Company's tonnage is based on a careful examination of its property, locating the proposed collieries where they will be best calculated to develop it economically, and arranging the dates of opening so that the cost of improvements shall not bear too heavily at any time, nor the tonnage increase more rapidly than a market can be found for it. This estimate was made independently by the Company's engineers, and as it shows that their estate will ship a generally increasing percentage of the Schuylkill Region, the two estimates may be considered to fit well together. This development of the estate will be considered as being as rapid as can probably be made, when we reflect that in the years from 1871 to 1876, when the Company's credit was good, and when every nerve was strained to place the estate in a position to make large shipments, there was expended in opening new collieries and repairing old ones the sum of \$3,341,732.98, while the estimate of the expenditures on new collieries in the future, which expenditure must be made out of earnings, without increasing the capital accounts, is as follows :

F.—*Statement showing new collieries required to meet estimated increase of shipments from Company's estate.*

Period.	Collieries to be opened.	Cost.
1880 to 1890.....	23	\$2,375,000
1890 to 1900.....	33	3,280,000
1900 to 1910.....	22	2,835,000
1910 to 1920.....	5	500,000
1920 to 1930	12	1,610,000
Total 1880 to 1930.....	95	\$10,600,000

These sums include nothing for work of any kind to be done at the fifty-four existing collieries.

The object of carrying these estimates of tonnage and cost of improvements so far into the future, which involves so many unknown quantities, is solely to get the best possible basis for a valuation of the Company's estate; and it was in order to examine the subject from as many sides as possible, and leave no ascertainable cause of error, that the examination had to be extended over the whole anthracite field.

II.—*The profit that can be realized on mining.*

In making an estimate of profit on mining, I have taken as a basis what may be considered a fair royalty charge, considering the Company in the light of a land owner, and assuming that the average price paid to land owners will represent roughly the amount that can be realized from coal lands. It will be said that this would exclude all profit to private individuals who are working collieries under leases, and paying royalties on their coal. This is true, and it is

the history of the coal trade in the Schuylkill region, that only where private operators have unusually good and cheaply worked collieries, or unusually good coal that commands a high price, have they been able to maintain themselves. If this has been the history in the past, when collieries were cheaply opened, when neither coal nor water had to be brought up from great depths, when the ventilation was simple and the expense of timbering the mines light, the only safe conclusion is that which the state of the trade shows has practically been reached in the Schuylkill region, where in the whole of the Mahanoy and Pottsville districts, there is hardly to be found one successful private operator working a mine at any considerable depth below the surface. Those who have had deep mines have been obliged to part with their collieries, and the few who now make a living are working comparatively near the surface.

The royalties paid vary considerably throughout the anthracite field, being generally highest in the Lehigh region, where the coal is cheaply mined, and commands a very high price and lowest in the Lackawanna and Shamokin districts, which are distant from market, and where the coal is not choice. The Reading Company pays to the City of Philadelphia for the coal taken from the city lands, an average of $29\frac{3}{10}$ cents per ton. It is true that this coal is exceptional in its quality, and in the cheapness with which it can be mined, and it is not certain that in the future such high royalties can be paid for the inferior coals at greater depths; but under the reasonable supposition that there will be in the future a fair degree of prosperity in the coal trade, it seems right to consider that this will not prove an excessive rent, and to assume as the royalty or profit on which to base the estimates of value the sum of 30 cents per ton. This is fully up to the average price paid throughout the anthracite field, for though many of the royalties are higher for the larger sizes,

they are very low on chestnut and pea coals, and usually nothing on the smaller coals.

As this allowance for profit in mining may seem to be small, it will be well, in order to justify it, to cite the history of some of the mining enterprises in the State.

Of the companies who own coal lands and mine, transport, and sell the coal, there are very few whose reports are published, but the reports of the coal companies controlled by the Pennsylvania Railroad Company for the last few years are accessible. The Pennsylvania Railroad Company is a large producer of coal, the shipments from its anthracite collieries having averaged 1,250,000 tons for some years past. In order to reach the figures which represent the actual cost of mining, it will be necessary to subtract from the expenditures as published, all royalties paid to other companies, interest, dividends, &c. After doing this so far as the reports give the necessary information, I find that in the last six years, from 1874 to 1879, the shipments have been 7,592,161 tons, and the profits \$2,301,674, or $30\frac{3}{10}$ cents per ton. Now the Pennsylvania Railroad Company's experience should be unusually favorable. Their collieries are at the western end of the Wyoming, Shamokin, and Tremont districts, and therefore nearest of all the anthracites to the western market; they should mine cheaply; they have practically the control of the markets of western Pennsylvania and of part of Ohio, which can only be reached over their railroad lines; they have usually more demand than they can meet from their own collieries, which are therefore enabled to run more steadily and thus more economically than most others, and they have in their Franklin coal, which they mine largely at Williamstown and Wiconisco, a fuel which commands about 75 cents above the price of the ordinary anthracites. If they could only realize 30 cents per ton, it would be unwise to assume that the Reading Company

can make in the future a greater profit. Of the six years embraced by the reports before me, the first two were years in which they did a very profitable business. That Company has not usually joined in movements to restrict tonnage, and therefore had to some extent, the advantage without the cost of the restrictions of 1875 and 1876.

The Reading Company's own experience has been even less of an argument in favor of high profit from mining coal. From their reports for the last four years, which embrace all the period for which they have published reports of cost of mining, I find :

That in 1876 (11 mos.), they shipped 4,330,101 tons at a loss of \$653,359=15.1 cents per ton.					
" 1877	"	4,890,362	"	"	468,940= 9.6 " "
" 1878	"	3,552,053	"	"	512,806=14.4 " "
And in 1879	"	5,267,752	"	"	325,532= 6.2 " "
Total for 4 years,		18,040,268	\$1,960,638=10.9 " "		

This includes coal shipped by their tenants from the Company's estate, and the royalty received therefor, but does not include the royalty paid for coal mined by the Company on others' lands; the problem being to find what profit or loss there would have been had they mined their own coal exclusively. The iron ore traffic is also included, as the means of separating the office and selling expenses of this branch of the business is not given. The iron ore transactions were comparatively small, but as they always have showed a profit, they do not certainly make the case of the coal department any worse.

Nor can it be said that the Coal and Iron Company lost money because the Railroad Company charged exorbitant rates of freight. In these same four years the Railroad Company earned \$3,414,628 less than enough to pay interest on its bonds, in addition to a deficiency of \$3,988,026, by which the Coal Company earned less than its interest, and the further actual loss before reported of \$1,960,638, so that on the whole four years business the allied Companies lost

51.9 cents per ton, not counting royalties paid, or 56.9 cents if royalties are included.

As therefore the Railroad Company can hardly be expected to lower its charges, it is evident that the Coal and Iron Company will have to increase its net profit 41 cents per ton before it can realize the royalty I have assumed. As the cost of mining cannot be lowered, but will increase above the average of the past four years, this increased profit on mining must come from higher prices realized for coal; and as these bring with them increases in freights and in wages, it will require an advance of at least 75 cents per ton in the average price realized for coal to make the profit required. I have gone over this question minutely, because on the profit that can be realized from mining depends the value of the coal in the ground, which measures the worth of the Company's estate. I am firmly of opinion that with coal selling at prices which experience has shown us to be probable, with freights at rates at which the Railroad Company can pay its way, and with the inevitable increase of cost of mining from the many expenses consequent on increasing depth, it is unwise to expect any profit greater than 30 cents per ton for a term of years.

The coal trade has apparently entered on an era of large production and small profits. In the earlier days when the resources and the credit of individual producers, who then did most of the mining were small, and when there was not so much cost of pumping water and mine repairs as to make the stoppage of the mines a very serious affair, unremunerative prices for coal had more tendency to work their own cure by rapidly restricting production; but with all these conditions of resources and cost of standing idle changed, the natural tendency must be to stimulate production, and so prevent any great rise in prices. Those companies which can produce coal cheaply, which are not heavily in debt, and

the coal production of which is only one of many elements in their business, will not permanently consent to the restrictions that those less favorably situated would prefer, and large product and low prices will probably be the rule of the trade hereafter.

Lest, however, some one should press these arguments still further, and say that judging from the past there is no value in anthracite lands, and that no revenue can be expected from them, I would add that it is not reasonable to suppose that an article of such prime necessity as anthracite can be produced for a long period of years below cost; that we have just passed through a time of great depression in business, and in prices of commodities of all kinds; that the concentration in one ownership of the coal lands, the mining, carrying, and selling of the coal, which were formerly divided into four distinct interests, being comparatively new, has given rise to a fierce and unreasoning competition between the great coal owners for the control of the markets of the country; that there are reasons to hope that the losses incurred in this contest have determined all the interested parties to adopt for the future a harmonious course of action, which will bring the price of coal up to a point at which by economy and judicious management the owners of the property shall have some reasonable returns for their investments, and that so many interests can be harmonized in this course of action as to secure the practical co-operation of all. If these results cannot be reached, there will until reason resumes her sway, be, as there has been for a few years, very little value in coal lands; but if, as seems probable, the present harmony of action can be maintained, there is no reason why a moderate profit on mining should not be realized.

Considering the question of royalty or average profit of mining settled, let us next inquire—

What is the money value of the Company's coal lands?

To consider the question thoroughly has involved the study of the proper method of developing separately each of the eighty-two tracts of land which was the subject of a separate purchase; where collieries should be placed; when they should be opened,—which involved the question of how soon the special coal produced on that tract could probably be marketed; and whether the deduced value in each case was equal to the incumbrance remaining on the property. After making these separate examinations, the same questions have been considered for the estate as a whole.

I submit with this report statement G, being a tabulated estimate of the value of the coal estate of the Philadelphia and Reading Coal and Iron Company. The tracts named therein are arranged as nearly as convenient in geographical order; beginning at the western end of the Shamokin district, passing eastward to the eastern end of the Mahanoy district, thence southward to the eastern extremity of the Pottsville district, and thence westward to the western end of the Tremont district. These tracts are also divided into:

I. Tracts in which the Company has an undivided ownership of the lands; and

II. Tracts which the Company controls through ownership of the stock.

In the first section of the statement, the coal product of the estate is estimated. The actual experience of mining, through a term of years, gives reliable data of the yield per acre of lands that contain certain veins of coal. These lands are divided into four general classes, to each of which is assigned its proper acreage and yield; and from these data the whole possible product is estimated, giving the grand total before stated of 1,208,254,000 tons. Next, the time

required for developing the lands so as to bring each tract up to a specified production is shown, the revenue to accrue from this production at thirty cents per ton of profit, the time at which this production will exhaust the property, and the date of maturity of the sinking fund, which will again be referred to in a later part of this report. This gives the elements required to complete the value of the coal in the estate, and the next columns show the value of the standing timber, and of the surface where there are farm lands producing rent, or town lots. The sum of these values makes the total estimated value of the estate; but, as in many of these tracts the Company has a limited ownership, there follows an estimate of the Company's interest in all these elements of value, and the statement closes with the value per acre of the property, and the encumbrances remaining thereon.

The method of deducing the present value of the coal from the present and future revenue, can perhaps best be explained by an example, and I will take for that purpose the Tamaqua lands. These lands have a present revenue from coal rents of \$3,171 per annum, but as this is practically absorbed in taxes and superintendence, I have disregarded it. The estimate of development gives an annual yield of 200,000 tons in 1885 and thereafter; and an additional annual yield of 300,000 tons in 1890 and thereafter; this rapid development, which contemplates the re-opening of two collieries now unworked by 1885, and the opening and extension of two other old ones, with the construction of an entirely new one by 1890 (the whole entailing a cost of \$500,000), being proposed on account of the nearness of this estate to the market, the desire to realize as soon as possible a revenue to meet the heavy interest charges remaining as an encumbrance on the estate, and because there are two collieries which without very great expense, can be made to produce largely by 1885.

The conditions of the problem present two unknown quantities; X representing the present (1880) value of the coal, and Y an annual contribution to a sinking fund, which shall accumulate so as to retire the value or X by a certain date. The maturity of the sinking fund for tracts which will be exhausted before the year 1930, is taken at the date of exhaustion; for tracts which will be exhausted between 1930 and 1980, at a date found by adding to 1880 ninety per cent. of the term between 1880 and the time of exhaustion; for those which will cease to produce between 1980 and 2030, eighty per cent. of the working term is added to 1880; and after 2030, the term added to 1880 is seventy per cent. of the working term. This restriction of the sinking fund term for the distant future, is made to allow for the increased cost at the great depth at which most of the coal will then be mined, it being considered prudent that the land should be paid for before the era of greatest cost is reached.

The date thus found for the maturity of the Tamaqua lands sinking fund is 1995.

The equations to determine the values of X and Y , are $X = (A - Y) \frac{1}{g^0}$, and $X = B Y$, where A is the annual revenue, and B is the sum of the multipliers of the annual contributions to the sinking fund; these multipliers being what one dollar, invested at compound interest, will realize in the number of years to elapse between each year of the term and the date of the maturity of the sinking fund. The annual revenue will then be divided into two parts; one which will pay interest on the value of the lands, and the remainder, a part of which will be used as the contribution to the sinking fund, and the rest for the maintenance of improvements, for taxes, &c. The first is capitalized at six per cent., which is one per cent. lower than the Company is now paying on most of its tract mortgages, but not lower than it may hope to reduce its interest charge after a re-

organization, with its burdens reduced and its credit re-established. The contribution to the sinking fund is supposed to yield a revenue of four per cent., which is as much as it is safe to estimate for a fund running into the far distant future, and loaded with the charges above mentioned. We have then, for the Tamaqua lands, two cases :

I. Where the annual revenue in 1885 amounts to \$60,000; and

II. Where the additional annual revenue in 1890 amounts to \$90,000.

The solution of the first case shows that that part of the lands producing the \$60,000 revenue will have in 1885 a value of \$991,044, and that part which will produce \$90,000 in 1890, will be then worth \$1,483,636. To bring these values to 1880, they have been reduced by finding the sums which invested at compound interest, at the rate of eight per cent., would reach at the given dates the sums named. This gives as the value of the lands in 1880, for case I, \$674,488, and for case II, \$687,207, or a total value of \$1,361,695.

The compound discount, as it might be called, is calculated at eight per cent., because there must not only be interest paid, but a fund for improvements must be provided, the object being to place a value on these lands, such that the estimated revenue will not only pay interest and the principal at maturity, but also all taxes, maintenance, and improvements, so that no money need be borrowed from any other source except that, as in this case, the revenues must for a time be anticipated.

It will be seen that this compound discount makes a very rapid reduction in the value of the property if its development is delayed, but that this reduction is not excessive, will appear from an examination of several cases.

If in the case of the Tamaqua lands this reduction is made at the rate of six per cent. per annum, the value in 1880 will be, in case I, \$740,566, and in case II, \$910,823. The sum of these is, \$1,651,389, which is \$289,694 more than the amount found by reducing at eight per cent. Now if this sum is invested at six per cent. compound interest, it will produce, in 1884, \$352,125. Taking out of this \$150,000 to make the two collieries to be opened by 1885, and re-investing the balance, \$202,125, for five years, we shall have by 1889, \$257,965 to open three additional collieries in 1890, whose cost is estimated at \$350,000.

In the Repp tracts, where the estimated revenue is \$9,000 per annum from and after 1910, and \$36,000 additional per annum from and after 1930, the difference between the 1880 values at eight per cent. and at six per cent. compound discount, is \$28,735. This compounded at six per cent., will yield in 1908, \$146,884, of which \$60,000 is needed to open a red ash colliery to be ready to produce coal in 1910. Compounding the balance, \$86,884, it will yield in 1928, \$278,649, and it is estimated that \$200,000—one-half the cost of a deep shaft—will then be charged to this tract, being needed to produce coal in 1930.

In the Associate lands, near Shamokin, the anticipated revenue from and after 1900 is \$150,000. The difference of the values in 1880, reduced at eight per cent. and at six per cent., is \$227,850, which invested at six per cent. till 1895 will yield \$546,056, and the money required to open five collieries is \$500,000.

These last two instances were taken as the ones most likely to show a defect in the rule, on account of the long periods through which the compounding goes on; and the substantial agreement between the sums produced and those required for improvements, shows that the rule is as good as any simple rule that could have been adopted.

When the same rule is applied to the whole estate, it produces up to 1930, the period at which the shipments are expected to reach the maximum, and after which there is no more to be allowed for improvements, \$10,883,566, while the sums required to make the improvements are, as before stated, \$10,600,000.

It may be thought that the properties whose development is late have been hardly treated, and might have been made to produce earlier, but the collieries were assigned to the tracts, and their time of opening was determined by the Company's engineers, before I had devised the present method of valuation; and if any one tract is faster developed than here stated, it must be by retarding the development somewhere else, for the development of the estate, as a whole, cannot reasonably be expected to be more rapid than is here estimated.

The low values placed by the rules adopted on some of the properties whose development is distant, emphasize with great force the truth that it is ruinously costly to keep for many years properties against which there is a heavy interest charge constantly accruing, and from which no present revenue can be derived.

That it is only those properties which are not likely to be used for years, that are given a low valuation by the system adopted, will appear from an inspection of Statement G, where, for instance, tracts Nos. 20, 21, and 22 are valued respectively, at \$1,439, \$1,169, and \$1,206 per acre; and this though large quantities of coal have been taken from each of them. It is such properties as Nos. 35, 51, and 55, which cannot come into use for from thirty to fifty years, whose interest charges and other expenses so diminish their value, that they are now only worth \$64, \$67, and \$61 per acre respectively. All of these last named tracts are rich in coal, and will in time yield large revenues, but for the

present they serve no purpose except that of preventing their use by rival interests.

Continuing the explanation of Statement G:—after the value of the estate due to its future coal product is obtained as above described, the values of the timber and surface are added, giving the total estimated value of each tract; and the sum of these values, \$32,394,799 is, of course, the total value of the estate, of which \$31,303,902 is the value of the coal, \$913,572 the value of the timber, and \$177,325 the value of the surface. Next follows an estimate of the Company's interest in this estate, the division being made on the basis of the Company's undivided interest in the lands in Part I of Statement G, and on the basis of their stock ownership in Part II.

This gives the Company's interest an estimated value of \$30,630,648, of which \$29,603,041 is the value of the coal, \$861,426 is the value of the timber, and \$166,181 is the value of the surface. This estimate includes the colliery improvements on the lands owned, and on those controlled by the Company, as without them the lands would not be prepared to ship coal, and therefore could not produce the revenue which is the basis of their valuation; and it is for this reason that in the case of those tracts whose improvements are not yet made, it has been necessary to provide a fund out of the difference between the compound discount, computed at eight per cent. and at six per cent., with which to make the necessary improvements, the money being virtually provided by pledging the future revenues.

The valuation does not include the colliery improvements on lands of other owners held by the Company under lease. The last valuation put by the Company's officers on these improvements was \$566,836, which seems to me a reasonable valuation. Together, these sums amount to \$31,197,484, which is my estimate of the value of all the

Company's property in coal lands, timber lands in the anthracite field, and colliery improvements. The value of the Company's interest in the coal on the estate, stated above as \$29,603,041, was found by adding together the computed values of the separate tracts. If we consider the estate from another point of view, regarding it as one body of lands, and using the total shipments anticipated at the several decennial periods, as previously stated, with the revenues due to the assumed profit of thirty cents per ton, the present value of the Company's interest in the coal in the estate is found, under the rules before explained, to be \$30,668,525; the coal in the whole estate being valued at \$32,431,609.

These values differ from those derived from the sum of the tract values by about three per cent., which is as near an agreement as could reasonably be expected. Statement G closes with a list of the encumbrances on the property, being the indebtedness due mainly to parties other than the Philadelphia and Reading Railroad Company, which indebtedness amounts to \$14,715,058.

As the general result of this inquiry we have these facts:

I. That the Philadelphia and Reading Coal and Iron Company has in its anthracite lands in the Schuylkill region an estate which is not, and cannot hereafter be paralleled in America for extent, productiveness, or value; and that over the railway, canal, and steamship lines of its ally, the Philadelphia and Reading Railroad Company, it has unequalled facilities for reaching at low cost, the markets where its products are required, which are the best markets in the country.

II. That this estate includes nearly thirty per cent. of all the anthracite lands in Pennsylvania, and that it can send to market nearly thirty-four per cent. of all the future product of anthracite of that State.

III. That judging from the history of the coal trade, the annual production of this estate, which may be taken at 4,300,000 tons at present, will go on increasing till in fifty years it will reach its maximum at about 13,360,000 tons; that after remaining at that figure for about twenty or thirty years it will begin to decline, but that the estate will not be wholly exhausted at the end of the next century.

IV. That assuming the profit on the future coal product of the estate to be 30 cents per ton of coal shipped; that the Company will be able to reduce the rate of interest on the money needed to hold and develop the property from 7 to 6 per cent. per annum, and that the development will be at the rate just stated, the whole estate has a value of \$32,394,799; that the Company's interest in the estate is worth \$30,630,648, and that, including colliery improvements belonging to the Company, but situate on lands owned by others, the whole of the Company's property is worth \$31,197,484.

V. That of the original price of these lands there still remains unpaid the sum of \$14,715,058.38, which amount is represented by mortgage bonds, and is mostly in the hands of parties other than the Philadelphia and Reading Railroad Company.

The estate is, as has been just shown, worth much more than the encumbrances remaining on it, but as there may be some of the tracts which were separately purchased which are overweighted with debt, I will, in further compliance with your instructions, proceed to make a series of short reports, in which, after some notice of the special circumstances of each case, I will consider the subject of the indebtedness remaining on each of these tracts.

In order that these reports may be as concise as possible, I will refer you for information on many points to Statement

G (*see appendix*), and will not usually report the facts which may be obtained from an inspection of that statement, nor will I comment on the value of the lands as compared with the cost or encumbrances except where the latter are excessive, nor speak of the geological structure except where it is disturbed, or where there is reason to think that mining will be less than usually successful.

I will also refer you to H, a map showing the position and extent of the Company's estate (*see appendix*), defining the limits of each of the separate tracts, the collieries, railroad lines, and giving such other information as can be shown on such a map, and may serve to illustrate this report.

I. *Tracts in which the Company has an undivided ownership of the lands.*

1. *Trevorton Estate.*

This estate is owned by the Company and the Lehigh Valley Railroad Company, the two companies having equal undivided interests. The Company pays to the other owner a royalty of thirty cents per ton for sizes above chestnut, fifteen cents per ton for chestnut, and five cents for pea, for one-half of all the coal shipped ; and it also pays five-eighths of all taxes that may be levied on the property.

There are two collieries on the estate ; No. 1, which is not now in operation, being on the Lykens Valley Veins, and No. 2 on the Mammoth Vein, which is here split in two parts. These veins are all good, but the coal is so soft as to crumble in transportation. Some additional developments are needed underground before work can be resumed at Colliery No. 1, but No. 2 is working, and in good order. The buildings and machinery at both are good.

No. 2 is a cheaply worked colliery, having no water to pump, as the workings have not gone below water level ; and the four additional collieries, which are needed to develop

the estate thoroughly, will all by being opened above water level avoid pumping expenses for some years.

The chief drawbacks to the value of this property are, 1. The softness of the coal, and 2. Its distance from the eastern market. Should the western market ever be opened to the Company's coal, its situation will be correspondingly advantageous.

2. *Associate lands.*

Under this title the Zimmerman and Boyd tracts will be considered, as well as those marked "Associate Lands" on the map. In this case also, the interest which does not belong to the Company, which is about twenty-nine per cent. of the whole, is owned by the Lehigh Valley Railroad Company. These properties yield no revenue at present, and no branches of the Reading Railroad penetrate them. Surface shaftings show that the coal is probably of good quality, and as it can be reached without going to great depths, the five collieries which are assigned to this body of lands will not be very costly. The timber is exceptionally fine.

The Company's interest is valued at less than its cost mainly because the property will be late of development, and it is worthy of consideration whether the Lehigh Valley Railroad Company or some other lessee might not be permitted to open one colliery to create a revenue, and lessen the burden of the cost of the property.

3. *Shamokin and Bear Valley lands.*

In the computations of Statement G the Russel tract is included with the Shamokin and Bear Valley lands proper.

These lands contain three collieries. Bear Valley Shaft Colliery works the Mammoth Vein, which has twenty feet of excellent coal. No new developments will be required at this colliery for some years, and the buildings and machinery are in good order. George Fales Colliery, working the two veins

immediately over the Mammoth, has not much coal opened at present, and some further developments will be needed to again make it a successful colliery. The machinery and buildings are good. Sterling Colliery, now operated by lessees, is on the Russel tract, and furnishes an outlet for coal from an adjoining tract belonging to individual owners, which coal pays five cents per ton to the Company for the use of the Sterling colliery improvements, and for right of way.

The two additional collieries assigned to these lands will have to be opened by shafts of moderate depth.

4. *M. E. Levenson tract.*

This tract is at present producing no coal. It contains the Mammoth and underlying veins, with, perhaps, some of the upper ones, and they will probably be found good. The shaft which will develop the northern part of the Shamokin and Bear Valley lands will also work this tract, so that the charge against it for improvements will not be excessive.

5. *Wm. M. Rockefeller tract.*

No colliery is located within the limits of this small tract, but nearly one-half of the coal shipments of Sterling Colliery are made from it. The Mammoth Vein is here very good, and contains twelve feet of workable coal. No charge for improvements need be made hereafter against this property, as the collieries which are or will be located on other tracts, and their extensions, will reach all of its coal.

6. *Big Mountain Improvement Company's estate.*

Of the lands belonging to this estate which contain no coal, the larger part is in a timber tract which is entirely outside of the coal measures.

The Burnside and Big Mountain Collieries are located on this estate. The former has lately come into the possession of the Company by purchase from the lessees; and having

been put in order, is now in good producing condition, and will require in the near future no considerable expenditure for improvements. The latter is still a leased colliery. The coal tributary to it above water level is nearly exhausted, but the lessees are now sinking a slope and making the other necessary improvements at their own expense. The buildings and machinery at Burnside Colliery are good, and the colliery will, if worked continuously, produce coal cheaply. At Big Mountain Colliery the buildings and machinery are of little value, but will probably outlast the lease, which expires in 1886. This, too, will be a cheaply worked colliery. The two new collieries assigned to these lands will be opened by shafts of moderate depth.

7. *Brady, Gray, and Wetherill tracts.*

There are no working collieries on these lands except the Greenback, a leased colliery on the Brady tract.

Henry Clay Colliery No. 2, on alien lands, takes a large tonnage from the Gray tract, paying a royalty therefor; and the Peerless Colliery gangways are also about entering the same tract.

There are some small openings on the Wetherill tract which mine coal for domestic use in the town of Shamokin, but their product is insignificant. The Daniel Webster Colliery on the Wetherill tract was abandoned in 1875, the available coal having been exhausted, and the lessees being unable to continue the development further. The collieries yet to be opened will be comparatively inexpensive to construct, and will be of only moderate producing capacity.

8. *McIntyre lands.*

These lands contain no working collieries, but the Excelsior and Locust Gap—leased collieries—derive a large portion of their tonnage from them; and the Company's Locust Spring Colliery will soon extend its western gangways into them.

These neighboring collieries will mine all the coal from this property, except that one shaft will be needed in the Southern or Mahanoy basin; but this expenditure will not be made in the near future.

9. *William Sheed tract.*

No colliery is situated on this tract, nor do the gangways of any colliery penetrate it now, nor will they in the near future. The lateness of the development alone causes this tract to be valued lower than those immediately surrounding it, for there is no reason to doubt the goodness of the coal. A part of this tract projects into the territory of the Pennsylvania Railroad Company, and is somewhat isolated; but as a portion of their property immediately to the westward projects similarly into the Company's estate, it may some day be found to the advantage of both parties to revise the common boundary, each giving the other what is not valuable to itself, and receiving what is desirable.

10. *Samuel Morgan tract.*

The same remarks as to want of present revenue, lateness of development, and consequent low valuation, which were made concerning No. 9, apply to this tract, which adjoins it on the south.

It, however, is so placed in regard to other parts of the Company's estate, that it should certainly be retained.

The gangways of Mount Carmel Shaft Colliery will in time penetrate it, and no improvements will probably ever be needed within the tract limits.

11. *Mt. Carmel Coal and Iron Company's estate.*

Mt. Carmel Shaft Colliery is the only one whose improvements are on this property, Coal Mountain Colliery having been abandoned by the lessees about six years ago. Stuartville Colliery, on alien lands, is mining on the eastern end of the property, and will for some years pay a considerable sum in royalties.

One more colliery is all that will probably be needed to develop this estate, but it will not be required for some fifteen years.

Mt. Carmel Shaft is one of the largest and best collieries owned by the Company, working cheaply, and having produced as much as 17,000 tons in one month. The buildings and machinery are nearly new, and are very good.

12. *Mt. Carmel Locust Mountain Coal Company's estate.*

The Reliance Colliery, which has lately passed from the hands of lessees into those of the Company, is the only colliery on these lands. It is now in all respects in good order, and will be cheaply worked and produce good coal. The value of the tract is less than the encumbrances remaining on it by \$40,000, but as the Reliance Colliery is a good one, with a large producing capacity, and as the Lehigh Valley Railroad Company could enter into immediate possession should the Company abandon the lands, I advise Receivers to retain the property, making an effort to reduce the encumbrances as much as possible.

13. *Helfenstein lands.*

This body of lands contains the Helfenstein and Ben. Franklin Collieries, both on the Lykens Valley Vein near its southern outcrop. The stratification along the southern edge of the coal field is disturbed, and these collieries have never been very successful. The former has not been worked for the last three years, and will probably not work again till a tunnel is driven through to the next northern basin, in which the coal will probably be found to be good. The buildings and improvements, which are sufficient for a colliery of moderate capacity, are in good condition.

The Ben. Franklin Colliery is now in the hands of lessees. It is in much the same condition as the Helfenstein Colliery, not being able to produce much more coal without further

developments. The buildings and machinery are in fair order. The collieries necessary to the further development of these lands will be sunk in the main Mahanoy basin, in which there will no doubt be an abundance of good coal.

This property is greatly over-encumbered, and I do not think it to the Company's interest, there having been but little of the original purchase money paid, to retain possession of it. It is true that the Philadelphia and Reading Railroad Company has a branch running into these lands, about seven miles long, which might be rendered useless were they to pass into the hands of any rival railroad company, and that it would not be a very difficult nor costly matter to extend the Lehigh Valley or Pennsylvania system of railroads into them, the distance from Mount Carmel being only five miles, but the lands are not an attractive investment, and I think it wise to abandon them now, and run the risk of regaining them again if they shall ever be wanted.

If the bondholders are willing to make large concessions to induce the Company to keep the property, I would advise Receivers to require a reduction of the outstanding bonds to one-half the present amount.

14. *Locust Summit Improvement Company's lands.*

The improvements of Locust Gap and Locust Spring Collieries are on this tract. The former is a leased colliery, the lease expiring in about seven years. The buildings and machinery are good, and the colliery should have a prosperous future. Locust Spring Colliery is a first rate colliery, the coal good, and the buildings and machinery almost new. No further expenditure will be required for improvements on this tract for some years.

15. *Locustdale tract.*

The Merriam and Potts Collieries are both situated on this tract, and the Monitor Colliery gets part of its coal from it.

The Merriam Colliery is in good order, and capable of a large production at a moderate price. The Potts Colliery is also in good working condition, but on account of a fire which somewhat endangers a part of the workings, and the great quantity of gas which makes mining costly, and to some extent dangerous, it is not likely to work quite as cheaply as the Merriam.

Neither of these collieries will need in the near future any considerable expense for improvements; and the new collieries which will be required to complete the development of the tract will not be wanted for some years.

16. *Ashland estate.*

There are no collieries at present working on this estate, as new levels are now being opened in both the Tunnel and Keystone Collieries. They can both be made ready for shipments next year, but will require a large expenditure to bring them up to the point of full production. They both work the Mammoth Vein at a considerable depth, and are not among the Company's cheaply worked collieries. When the present improvements are completed, these two collieries will be in good condition.

From the northern side of the estate the Potts and Bast Collieries will draw a large part of their coal for many years, and to get the coal near the bottom of the basin will require one or more deep shafts.

17. *Fountain Spring tract.*

This is farm land containing no coal. Its value is derived from a farm of twenty acres, a country tavern, and a fine spring, which supplies the Tunnel Colliery with water.

18. *Necho Allen tract.*

There is but little workable coal on this tract. It includes the town plot of South Ashland, but there is a very small demand for the building lots, there being little likelihood that town will grow up at this point.

19. *Locust Mountain tract.*

This tract contains the openings of Bast Colliery, and furnishes a considerable amount of coal to Preston Colliery No. 2.

Bast Colliery is in good working order, and will not require further extension for some years. It mines coal cheaply, and its coal is good.

Its valuation is low considering its large present production, but this is due to the fact that there is not a great amount of coal left in the tract.

20. *William Jones tract.*

This tract contains within its limits the Shenandoah City, Plank Ridge, and Indian Ridge Collieries. It is in the heart of the Shenandoah Basin, which is the most productive part of the Schuylkill region, these three collieries having for the last five years had an aggregate tonnage averaging 213,046 tons per annum.

Shenandoah City Colliery will need to tunnel for the lower veins to keep up its shipments, and will probably not last more than fifteen years.

Plank Ridge Colliery is working on the veins underlying the Mammoth, and does not at present require any expenditure to open additional coal.

Indian Ridge Colliery has coal enough for several years supply, at its present levels, after which the shaft will have to be sunk to the underlying veins.

The buildings and machinery at all these collieries are in good order.

There will be some difficulty about working out the coal on the western part of this tract, as the principal business portion of the town of Shenandoah is situated on it. The coal lies at considerable depth below the surface, but it cannot be as thoroughly worked out as if the ground were unoccupied.

21. *Philadelphia and Mahanoy lands.*

This property is the most productive of all those owned by the Company, having for the past five years averaged three-quarters of a million tons of coal. It contains ten collieries worked by the Company, and three in the hands of lessees.

Bear Run Colliery was bought from the lessees in 1879. Its pumping facilities are not equal to the work required of them, but the colliery is otherwise in good order. The lower member of the Mammoth vein is about exhausted at the present working level, but the upper members are being worked, and the driving of a tunnel to the Buck Mountain Vein at the lower level will open a supply of coal sufficient for several years without further sinking. The Buck Mountain Vein has been cut by a tunnel at the upper level, but little coal has been taken from it. It will yet yield largely.

St. Nicholas Colliery was bought from the lessees in 1880. The two upper benches of the Mammoth Vein are at present producing nearly all the coal shipped by this colliery. A tunnel must soon be driven to the Buck Mountain Vein, which is in good condition here also, and the colliery will then be well supplied with coal. There is a great deal of pumping to do at this colliery, but the machinery is sufficient for the work.

Suffolk Colliery is still in the hands of the lessees, the lease expiring December 31, 1883. The Primrose and Orchard Veins are worked in good condition, though the veins are somewhat irregular in structure. The buildings and machinery are in good order, and there is coal enough opened to continue shipments on the present scale for several years.

Elmwood Colliery is not now working, the present lift being exhausted. To put it in good order again would require the sinking of a slope on the bottom bench of the Mammoth Vein to a level below the present one, and the driving of a tunnel to

the Buck Mountain Vein. The colliery will then be in condition to produce coal cheaply for several years. The machinery is adequate to its present work of pumping water, but must have some additions when a new lift is sunk.

Tunnel Ridge Colliery passed from the hands of the lessees to those of the Company in January, 1880. The machinery and buildings were not in good order, and have ever since been undergoing repairs which are now about finished. The Mammoth and underlying veins will be worked here. The eastern workings are somewhat restricted by the necessity of keeping up the surface in the southern part of Mahanoy City, and the western by the swamp bordering on Mahanoy Creek, but the swamp can be drained without great expense, and the coal under it can then be taken out. The colliery will then last without further sinking for several years.

Boston Run Colliery. A new level has just been opened here on the Mammoth Vein, which is in fine condition, but the permanent pumping machinery has not been put in. The Buck Mountain Vein will be opened by a tunnel at the new level, and the colliery will need no other extensive improvements for some time. The machinery and buildings have lately been put in good repair.

Staffordshire Colliery is a small colliery in the hands of lessees, working the Orchard and Diamond Veins, both of which are nearly exhausted within present lease limits. There is some question as to the propriety of extending the lease; but if it is decided not to do this, the colliery will soon cease operations. The buildings and machinery which belong to the lessees are of little value.

Webster Colliery is also a small leased colliery, working the Buck Mountain Vein. By opening the next overlying vein, the Seven feet vein, the life of this colliery can be prolonged for several years. The buildings and the machinery are the property of the lessees. They are sufficient for the work required of them.

Mahanoy City Colliery works the Mammoth and Primrose Veins, which both contain good coal. This colliery is in all respects in good order, producing a large amount of coal at a low cost, and will require no expenditure for improvements for several years.

North Mahanoy Colliery mines coal from the veins underlying the Mammoth Vein, which are in good condition. This is also a cheaply working colliery with large producing capacity, and will require no outlay for improvements in the near future.

Ellangowan Colliery is opened by a shaft 335 feet deep, which develops the Holmes Vein and the three members of the Mammoth Vein, all in good coal. This will remain for many years one of the Company's best collieries, the machinery and buildings being new and good, and the colliery being capable of a large production at low cost.

Knickerbocker Colliery works the same veins as Ellangowan Colliery. It will also have a large production at low cost for a number of years, without much further expenditure for improvements. The underlying veins have not yet been opened above water level.

Schuylkill Colliery was purchased from the lessees in 1878. A slope has since been sunk on the Buck Mountain Vein which is here in fine condition, and the outside machinery and buildings put in order, but the permanent hoisting and pumping machinery for the new level have not been supplied. When this want shall have been met the colliery will be a very good one, with a large product at low cost. The coal product will come mainly from the James McNeal tract.

This estate is producing so large a tonnage in proportion to its area that its valuation is very high, but it is well worth the amount of the estimate.

22. *James McNeal tract.*

This tract has at present no working collieries within its

limits, nor are any likely to be opened soon, as the coal of the northern basin will be taken to the Knickerbocker Colliery, and that of the southern basin partly to Ellangowan and partly to Schuylkill Colliery. The tract contains all the veins up to the Primrose in good condition, they having been all developed by the former owners through the Coal Run, Yatesville, and West Lehigh Collieries. These three collieries have all been abandoned, and the buildings and machinery removed.

23. *Kear and Patterson lands.*

These lands contain at present only two small collieries, Forrester and North Star, both in the hands of lessees. Hill-side Colliery, at the eastern end of the lands, having exhausted its supply at the first lift below water level, was abandoned in 1874, the tunnel which was driven across the basin having failed to find any workable coal. The improvements were removed, and the colliery allowed to fill with water, but it is possible that further explorations may prove that there is still workable coal within the colliery limits.

The chief product of the lands is from Boston Run Colliery, whose gangways extends into the tract. Tunnel Ridge Colliery will also take a part of its coal from this property.

24. *Tamaqua estate.*

There are at present no working collieries within the limits of this estate, except West Lehigh Shaft Colliery, which is shipping at the rate of ten thousand tons per annum. Of those which have been worked within the last decade, *New-kirk Colliery* was temporarily abandoned in 1876, because the Company had then enough collieries in producing condition to supply the demand for its coal, and there was considerable expenditure needed to bring up the production of this one to the point where it could work economically. The mine was allowed to fill with water, in which condition it

still stands, and the outside improvements have been partially removed. Before work can be resumed here the boilers will have to be replaced, the pumping machinery completed, the mine freed from water and put in repair, and such of the machinery as has been removed, replaced in the breaker. The coal at this colliery is good, but as the old levels were worked out and the new one not completely opened, there is some work to be done underground before large shipments can be made.

Buckville Colliery was stopped about the same time as Newkirk, the different members of the Mammoth Vein, and all the other veins down to the Buck Mountain Vein, being in fault. The outside machinery and buildings have been generally removed (the pumping machinery with its engine house alone remaining), and it will require a considerable expenditure of time and money to replace the machinery, remove the water, and make such explorations and developments underground as shall again open coal enough for the colliery's supply.

Wabash Colliery has not worked since 1873. At that time the pillar below the water level broke, and let into the lower workings such a great body of water that it was not thought wise to incur the expense of pumping out the mine, and providing the permanent machinery necessary to prevent its being again flooded. The coal was very good, and the colliery will no doubt be a profitable one some day. All the outside machinery and buildings have been taken away.

West Lehigh Shaft Colliery has for some years been shipping on a small scale only. The geological structure is much disturbed in this locality, and so little coal could be procured that it was found impossible while working the lower levels to make the colliery pay. The lower workings were therefore abandoned, the mine allowed to fill, and the supply of coal has since been taken by the lessees, who have possession

of the colliery from the workings above water level. Nothing remains of the machinery and buildings but the breaker, which will have to be rebuilt when the colliery is reopened. There is a reasonable probability that further explorations in the next basin to the northward will develop workable coal, which can be opened by deepening the shaft and driving a tunnel through the anticlinal bounding the basin in which the old colliery worked, thus making useful the present colliery openings.

Alaska Colliery, having been worked out at the existing level by the lessees, was closed in 1876. There is nothing left of the machinery and buildings, and the colliery will not be reopened, as the coal can be taken from the eastward extension of the gangways of Newkirk Colliery. The lowest veins of the series were worked here, and were found in moderately good condition.

Tucker Colliery, near the western end of the property, was abandoned before the Company purchased the estate in 1872, because the mine, as then opened, was exhausted. The coal of the Holmes vein, which was the one principally worked, was good. It is proposed to unite this colliery with Buckville hereafter, and it will therefore not be reopened in the present locality. None of the machinery and buildings of this colliery remain.

It will be seen from this description that the Tamaqua estate is not likely to produce much revenue in the near future, nor indeed at any time without considerable preliminary expenditure. There was, many years ago, a large production from these lands, but their later history has not been encouraging. The geological disturbances will always make mining here comparatively costly, even though we have learned much of late years about working faulty ground to advantage.

The computed value of this estate, \$1,388,797, is based on

an anticipated production of 200,000 tons, to be obtained in 1885 by reopening Newkirk and Buckville Collieries, and an additional product of 300,000 tons, making 500,000 tons in all, to be realized by 1890 from Wabash and West Lehigh Shaft Collieries, and a new colliery to be opened by sinking a shaft which would probably be nine hundred feet deep. This is the utmost that these lands can be expected to do, and only because they are so near to market, and therefore will have an advantage in freights, can their development with this rapidity be at all justified.

It should be considered, in deciding on the Company's policy with reference to this estate, that it is the most accessible to rival mining and transporting companies of all the Company's property in the Pottsville District; the railroad lines of the Central Railroad Company of New Jersey reaching its eastern boundary, and those of the Lehigh Valley Railroad Company being only a few miles distant.

Were there no encumbrance on this property, or but a small one, and were this the only tract about the retention of which there could be any doubt, it might wisely be kept to serve, as it was originally intended, as a barrier to aggression on the part of rivals; but under all the circumstances I have no hesitation in saying that the encumbrances are far beyond its value to the Company, and I advise Receivers to pay no more interest, and to part with the estate on the best attainable terms, unless the liabilities can be reduced at least one-half, and the interest lowered to six per cent. I think, however, the wisest course will be to part with the property entirely.

25. *Coal Hill tract.*

No coal has been taken from this tract, except that about forty years ago a gangway was driven into it from the eastward, which developed a good vein of coal ten feet thick.

Coal Hill Colliery, which is on the Valley Furnace estate just west of the boundary, was worked prior to 1870 on the Mammoth Vein, or the next vein underlying the Mammoth, the identification not being positive. The vein showed about six feet of good coal, but the gangways went into fault as they approached the boundary line. Little is therefore known of the general condition of the coal on this property, but as it lies wholly on the north dipping measures of the Sharp Mountain, which are very frequently faulty, it cannot confidently be counted good.

As the value is far below the amount of the encumbrance, as the coal is of doubtful character, and as these lands have no important connection with any other property belonging to the Company, I advise Receivers not to pay any interest on the bonds, and to surrender the property.

26. *Wood and Abbot tract.*

This tract has never produced much coal. A number of small drifts and two small collieries opened by slopes were worked to a limited extent some years ago on the red ash veins, and the Whitfield tunnel was driven on the northern part of the tract to the top member of the Mammoth Vein, but the coal mined from it was mostly taken from the Valley Furnace tract. From the developments made on three sides of this property, there is reason to think that the coal will be good, and as it contains all the veins from the bottom of the series up to and including the red ash veins, there is nothing but the lateness of its probable development which prevents its having a large present value.

27. *Valley Furnace lands.*

This estate contains no working colliery at present, nor is there a likelihood that any coal will, in the near future, be taken from it by the gangways of other collieries.

The coal near its northern out-crop is in good condition, and has been somewhat extensively worked; but all the collieries have been abandoned, and the machinery and buildings have been removed, except at the Ledger Vein Colliery, where they belong to the lessees.

Ledger Vein Colliery is situated in the northernmost basin, which it worked out, exhausting the coal of the Skidmore and Mammoth Veins, which were here in good condition.

Windy Harbor and Butler Collieries were opened in the next southern basin. The coal in this basin was also very good, the Skidmore Vein being eleven feet thick, and the Mammoth from twenty to twenty-five feet thick.

Sillyman's Colliery, which is probably in the same range, on the eastern end of the tract, also worked the Mammoth Vein in good condition.

These three collieries were abandoned before the Company's purchase in 1874. Windy Harbor was closed in 1869, because of trouble with the workmen, and because of insufficient pumping facilities, leaving almost untouched a newly opened level of very fine coal. Butler Colliery slope was allowed to break down in 1871, and it is such a wreck that it is doubtful whether it may not be better on this account, and because the old plan required two hoists to be made to get the coal to the surface, to sink a new shaft rather than re-open the slope. The coal was good, and a new lift had just been opened when the colliery was abandoned. At Sillyman's Colliery the Mammoth Vein was good, but the work was closed about 1851 because there was no more coal to be had without further sinking.

These mines are all flooded, but the probability is that one of them can be opened with profit in a few years, the coal being so good and the geological formation tolerably regular. That they are now closed is due to mistakes in management

made by the lessees, to deficient knowledge of mining geology, and to difficulties of other kinds which have now passed away.

In the next southern basin, the coal is good in the few places where it has been tested, but the Mammoth Vein lies so deep that its development is somewhat remote. Near the southern boundary of the estate, where the Coal Hill Colliery was worked, the coal was workable toward the eastern end of the property, but further west where the north dipping measures of the Sharp Mountain were encountered, it deteriorated greatly. It is probable that a colliery of moderate capacity can be opened, without much expense, in this neighborhood.

There is north of the coal territory described, an undeveloped basin, near the Silver Creek reservoir, which is known to contain coal, but its character is not proven. The opening of this territory will probably be delayed for some years, as there is no railroad within several miles of it, and it lies at so great an elevation as to require very steep grades to reach it.

The computed value of the tract, \$837,550, is based on a rapid development of the property, which will open two collieries, with a capacity of 150,000 tons by 1890; three more, with a capacity of 350,000 tons in the next ten years; and two more, yielding 200,000 tons in the next five years; so that the production of the estate should reach 700,000 tons in 1905, and there continue for many years. No more rapid opening of the estate can reasonably be anticipated, but this would leave the value so far below the cost, that I do not think the Receivers should continue to pay interest, nor should the property be retained, unless very much better terms can be made with the bondholders.

On account of its nearness to market, and because of its connection with other properties of the Company, I would

advise its retention, if the cost can be reduced one-third, and the rate of interest to six per cent; or if, on the present indebtedness, the interest can be reduced permanently to four per cent.; otherwise I would surrender it to the bondholders.

There was but little of the purchase money actually paid on this tract, so that its surrender would involve little pecuniary sacrifice, except the interest and taxes which have been paid.

The surrender of nearly all the Company's lands, as far west as the western boundary of the Valley Furnace lands, would, of course, invite the occupation of the territory by rival interests; but it is a very serious question whether the Company can afford the drain on its resources, which will be necessary to keep them out.

28. *Glentworth tract.*

Contains no working colliery; Cedar Hill Colliery having been abandoned about five years ago, and the machinery and buildings removed. The coal is good, but the colliery required extensive developments to make it again productive, and the tract can be more economically developed from Eagle Hill Colliery, and the proposed colliery north of Eagle Hill, on the next tract to the westward.

29. *Eagle Hill tract.*

Eagle Hill Colliery, a large operation, is situated within the limits of this tract. It works the Mammoth Vein, which is in fine condition, and from twenty to thirty feet thick.

Glentworth Colliery, the only other working on the tract was temporarily abandoned about six years ago, the existing level having been nearly worked out. The Holmes Vein was found there nine feet thick, and the Primrose Vein was ten or twelve feet thick, the coal of both being excellent. A red ash vein, still higher in the series, was extensively worked some years ago by a drift. It was of good size, and

the coal was fine. Glentworth Colliery now stands partly filled with water, and it is proposed after pumping it out to unite it with Eagle Hill Colliery, by sinking the slope another lift, and tunnelling to the Mammoth Vein at a level lower than the present Eagle Hill gangways.

The machinery and buildings at Eagle Colliery are good, having been lately thoroughly overhauled, and the breaker is so designed that with some additions it can prepare the coal from the Glentworth Colliery when that colliery shall have been reopened.

It is proposed to open another colliery within a few years on the north dipping measures north of Eagle Hill shaft, which will drain a large field of coal on this and the adjoining tracts.

30. *Mary Patterson, and*

31. *R. M. and L. Lewis lands.*

These tracts, as they are contiguous, and were united in their purchase, will be treated together. They will need no improvements within their own limits, their coal being tributary to Eagle Hill Colliery, and to the other colliery which will be opened on the Eagle Hill tract. They contain all the veins below and several above the Mammoth, which are all supposed to be in good order.

32. *Ravensdale tract.*

This tract is all underlaid with coal of very good quality, all the veins below the Mammoth and three or four workable veins above the Mammoth being found on it.

There is at present no colliery on these lands, but they furnish Pine Forest Shaft Colliery with about one-third of its supply, or 16,000 tons per annum. This yield will increase as the gangways from this colliery penetrate the tract

further, and its production will be still greater when the west gangways from the proposed colliery on the Eagle Hill tract enter its limits.

33. *Dilecamp tract.*

There are no collieries on this tract, nor is there any one whose gangways will soon penetrate it. It is on the range between Pottsville Shafts Colliery and the proposed colliery at Eagle Hill, but it will probably be several years before any of these gangways reach it.

The lateness of the development makes the present value small compared with the adjacent tracts. Its encumbrances are greater than its valuation, but its fortunes must probably remain united with those of tracts Nos. 29, 32, and 40, they having been all bought from the same parties, and the mortgage covering the several properties. As the other tracts are worth much more than the encumbrances, it is to the Company's interest to retain the whole four.

Wetherill estate.

Under this title I have grouped seven parcels of land in which the Company bought the Wetherill interest, which amounted to about two-thirds of the whole. The tracts are No. 34, Lee lands; No. 35, Repp tracts, including the Repp and Keim tract, and the Repps' heirs tract; No. 36, Saw Mill tract; No. 37, Oak Hill tract; No. 38, Ellmaker tract, and No. 39, Flowery Field tract.

These tracts were all included in the same purchase, and are covered by the same mortgage, so that the same action will probably have to be taken in regard to all of them.

34. *Lee lands.*

Contain the openings of the Eagle Colliery only, but the gangways of Pine Forest Shaft Colliery run through the southern portion of the estate, and Wadesville Shaft Col-

liery will, after a time, take coal from the veins underlying the Mammoth in the same section. Eagle Colliery which is in the hands of lessees, has nearly exhausted the Mammoth Vein coal within the limits of its lease, but it will continue for ten years to work the Skidmore Vein, and when the rougher coals come into the market the Buck Mountain Vein will also be worked here. Most of the Mammoth Vein coal on these lands has been worked over once, but so incompletely (as was the practice twenty years ago) that it will yet yield largely from the ground once traversed by the workings of the Hickory and Pine Forest Collieries.

35. *The Repp tracts,*

Including Repp and Keim tract, and Repps' heirs tract. These contiguous tracts being of the same character, will be described together. They have no collieries on them, nor do any collieries send their gangways into them. It is possible that the East Primrose and Diamond Vein gangways from the Pottsville Shafts Colliery may enter this territory; but if they do not, it will be many years before much revenue is derived from it, as the veins though good lie deep. This late development makes the computed present value of these tracts very small.

They could well be spared from the Company's estate, as their coal will not be wanted for twenty or thirty years, but I do not suppose the owners would consent to the estate being broken up.

36. *The Saw Mill tract.*

Contains within its limits the openings of Pine Forest Shaft Colliery. At this mine the Mammoth and Skidmore Veins are worked, and are both very good, the latter exceptionally so. Without further sinking this colliery can ship largely for ten years. A tunnel must in a few years be driven southward from the shaft level, which is one lift above the

present lowest gangway. It will develop the Holmes and Primrose Veins, of which the latter is known to contain coal of very good quality.

37. *Oak Hill tract.*

There is no colliery on this tract, but the western gangways of Beechwood Colliery penetrate it, and will continue to take coal from it for many years. The Mammoth Vein and the overlying veins are in fine condition, and when red ash coals are wanted, the latter can be worked to great advantage. The computed value of the property is comparatively low, because the realization of a large revenue will be delayed for some years.

38. *Ellmaker tract.*

Within the limits of this tract the openings of Wadesville Shaft Colliery are located, and the gangways from the northern end of the tunnels at Pottsville Shafts Colliery will soon open coal in it. When red ash coal is needed, a large amount can be taken from this tract, as it contains several red ash veins of good quality. The large present production of the tract gives it the high value shown in the tabular statement.

39. *Flowery Field tract.*

Has no working collieries at present. Wadesville Shaft Colliery takes a large amount of its coal from it, and the gangways of Pottsville Shafts Colliery will enter it within a few years.

Assuming, as I do, that the owners of this estate will insist on keeping it intact, I advise Receivers to retain possession of it. The tabular statement shows that it is worth its encumbrances, and it is part of a large and compact body of lands, all of which should remain the property of the Company.

40. *West Flowery Field tract.*

The revenue of this tract will be derived from the Wadesville Shaft Colliery, whose gangways are now ready to cross its eastern boundary, from the Pottsville Shafts Colliery, which will enter it from the same side in two or three years, and from Beechwood Colliery, whose workings will soon pass its western line.

The coal is excellent, and no money will probably ever be needed for improvements to develop it, except, perhaps, to drive some tunnels in the remote future.

41. *Mt. Laffee estate.*

Beechwood Colliery is the only one on these lands. It is in good working order, but needs some additional hoisting machinery to increase the economy of its working. It is not at present a cheap colliery. The Live Oak and several collieries on the southern part of the estate having been worked out at the existing levels, were abandoned some years ago. No new collieries will be needed,—the coal that will not be reached by Beechwood, going to Wadesville and Pottsville Shafts Collieries.

42. *The St. Clair tract.*

Has no working collieries on it, but the St. Clair shaft, whose improvements stand within its limits, will long continue in use for pumping and ventilating the present or future workings in the neighborhood. Wadesville Shaft Colliery is now taking coal from the tract, and the east gangways from the Pottsville Shafts Colliery will soon enter its limits. No improvements will be required to be made on these lands, those on the adjacent properties being sufficient to take all its coal.

The encumbrance is heavy, but as the loss of the tract would make a bad break in a part of the Company's property where it is very important that there should be no alien owner-

ship to conflict with the free developement of the mine workings, I advise Receivers to keep the property, securing, if possible, a reduction in the fixed charges.

43. *The Diamond or Williamson tract.*

There are no collieries on this property, nor are any likely to enter it soon. The veins are probably good, but they lie so far below the surface that it would take a shaft of 600 feet deep to reach the Primrose Vein, and a long tunnel thence to reach the Mammoth Vein. This will delay the opening of the property and the realization of revenue for about twenty years.

44. *The Minersville tract.*

Adjoins the last named tract on the westward, and, like it, has no revenue now, nor can any be anticipated in the near future. The collieries of the Wolf Creek Diamond Coal Company worked extensively on the northern part of this tract some years ago, but they have been abandoned, and are now full of water.

These two tracts should be considered together, being in the same range and subject to the same difficulties in development. The coal though good will cost so much to open on account of its depth, and the great difficulty of taking out the water from the very extensive abandoned workings to the northward, that its development will be much delayed; and this postponement of revenue greatly lessens the computed value of the properties. They are each worth less than the encumbrances, and unless the owners will consent to a reduction of the principal to about three-fourths of its present amount, or the interest to four per cent., I would advise Receivers to let the bondholders take them.

Some town lots have been sold by the Company from the Minersville Tract, but as the money received for them was used to retire a corresponding amount of the purchase-money

mortgage bonds, the alienation of these lots should not seriously complicate the question of the return of the property to the bondholders.

45. *Coal reserve, Minersville.*

The coal under the town of Minersville is likely to be late of development, and will probably be worked in connection with the two tracts last named. The value of this property will be somewhat impaired by the fact that the coal cannot be taken from under some parts of the tract without endangering the stability of the houses above. The property is paid for, and no question need arise as to the propriety of retaining it, though it might be sold if the Diamond and Minersville tracts are surrendered.

46. *Hammer and Hoy tract.*

This tract is entirely isolated from all other lands of the Company, and unless the Company should acquire other tracts contiguous to it, there will be no means of taking its coal.

The coal is estimated as being late of development; and the tract has therefore but little present value; but as there is no incumbrance on it, and as no opportunity of selling it is probable, it will be best to retain it.

47. *Carey and Hart tract.*

The situation of this tract is similar to that of the Hammer and Hoy, No. 46. It probably has plenty of good coal, but it will remain unworked for a long time.

48. *Salem Coal Company.*

These lands contain the higher red ash veins and all the veins below them, but as there is much red ash coal to be opened at points where the Mammoth is not so deep, and as there are no improvements on these lands, their development

must be delayed. The old collieries which were worked on this estate can hardly be reopened, and the property will have to be opened by a shaft.

The lateness of the probable development diminishes greatly the present value of these lands, and as they are overweighted with debt,—there having been no money paid on them,—I advise Receivers to let the bondholders take possession of them.

49. *Llewellyn.*

50. *Hughes and Langton. And*

51. *Little Klauser tracts.*

These contiguous tracts are treated together, though not covered by the same purchase. They are undeveloped, except that the east gangway of the Black Mine Colliery on the Dundas and Stroud lands, extends into the southern part of the Hughes and Langton tract. They will probably have to be opened by a shaft, which, however, will not be needed for many years. They contain the higher red ash veins, so that the Mammoth Vein will be found at considerable depth, and there is so much red ash coal in this neighborhood, and the demand for that grade of anthracite is so light, that a more rapid development of these properties than that indicated in Statement G should not be looked for.

52. *Phoenix Park Lands.*

The collieries on this estate are the Phoenix Park Collieries Nos. 2 and 3. The former colliery which works the Primrose Vein has its product lessened by geological disturbances which have made the measures faulty, and the coal difficult to reach. It is proposed to straighten the slope, and to tunnel to the Mammoth Vein, about one hundred and fifty yards distant. This will open a large amount of coal. The machinery will have to be renewed, and a new breaker built,

before this colliery can again be worked economically. It is now, from the smallness of its product, an expensive colliery.

Phoenix Park No. 3, on the Diamond Vein, has the promise of being a good colliery, when its eastern gangway, by being extended, gets into a more regular formation. The western gangway has been in a fault which it has now passed through. The buildings and machinery are good.

At the old Branchdale Collieries, now abandoned, the veins were faulty, but as they were the higher red ash veins, this does not necessarily discredit the lower veins, which there is reason to hope may be found good.

The eastern gangways of Otto Colliery and the western gangways of Forrestville Colliery will in time penetrate these lands, and take from them a large amount of coal.

The new collieries required for the development of this property will not be costly ones, as they will at first only need to go down to the red ash veins, which are near the surface.

53. *Andrew Lytle tract.*

The Company's interest in this tract was purchased with the Manhattan lands. Its revenue is derived from the workings of Forestville Colliery, the collieries whose openings are located on the tract being all abandoned.

Diamond Colliery, which was worked until within a few years contains some coal, but the buildings were burned and the colliery flooded, and it will not at present pay to re-open it.

54. *Manhattan Lands.*

Of this large body of lands a little more than one-half is underlaid with coal. On that part of the property which lies north of the Mine Hill, the Thomaston and Glendower Collieries are the only ones now in operation.

Thomaston Colliery works the Mammoth Vein, which is here divided into three parts, and the Church or Holmes Vein. The coal is good, and the colliery is in good order, and will not require much expenditure for several years.

Glendower Colliery will work all the coal in the Heckscherville basin, west of the Catharine Groh tract, for a mile or more. It will produce a large amount of coal without further expenditure for improvements, but the cost of the coal is rather above the average.

Taylorsville Colliery—nearly opposite—is abandoned, and is full of water. Most of the machinery and the buildings have been removed, and as the coal will be reached from Glendower Colliery it is not expected that Taylorsville will again be worked.

Anchor Colliery has been flooded for several years, a fire in the upper levels having proved unmanageable by other means. This is a serious matter, as all the workings on the south dip of the Heckscherville basin are connected for a distance of five miles east of the Catharine Groh tract, and flooding the Anchor Colliery has drowned the Pine Knot Collieries to the eastward; nor can the fire be extinguished except at great cost.

South of the Mine Hill the only collieries in working condition on this estate are Forestville, Otto, and Pyne.

Forestville Colliery is not working at present, the coal which is from the Skidmore Vein being rough, difficult to prepare, and not in demand. The colliery costs very little when standing idle, and can start at any time without expense.

Otto Colliery.—The red ash veins which have been the principal producing veins at this colliery for some years are exhausted down to the third lift below water level, but the northern basin has been lately opened by a tunnel which develops a large amount of coal. There is, however, a great

deal of water standing in the old workings, which must be taken out before much mining can be done in this new locality; but, this done, there will be coal enough accessible to keep up the colliery's production for a number of years.

Pyne Colliery.—This colliery will for several years get its supply of coal from the old level, so that the cost of sinking may be postponed. When it becomes necessary to sink, new machinery will be needed, but the old machinery and buildings are sufficient for the present needs.

Of the other collieries which have at times worked on these lands, there is none now in working order, and none at which working is likely to be resumed in the near future.

The small production of this great body of lands (not more than two medium collieries should produce), and the delay in its probable development, with its comparatively large amount of timber lands of small value, combine to reduce the value of this property much below its original cost. There is, however, no debt remaining on it.

55. *Gettle and Wagner Estate.*

This property contains only Mine Hill Gap and Ellsworth Collieries, the latter being in the hands of lessees. The two Pine Knot Collieries were abandoned in 1876, partly because the veins are not in first rate condition, but mainly because the fire at Anchor Colliery, to the westward, on the Manhattan lands, made the working of the Pine Knot Collieries dangerous, the three collieries being all connected. There will be no additional collieries opened on these lands, nor can the Pine Knot Collieries be opened till some means is found of controlling or extinguishing the fire at Anchor Colliery.

The veins on this property are in good condition from the Holmes down to the Mammoth, and some of those underlying the Mammoth will probably be found workable.

Repplier's Colliery has been abandoned and flooded for about ten years. There is still a large quantity of coal there, but the colliery was so costly on account of the difficulty of keeping the gangways open, that it entailed heavy losses on Mr. Repplier, the lessee.

Mine Hill Gap Colliery is in fair working order, but it is, and is likely to remain, an expensive colliery, the cost of re-timbering and pumping being large.

The machinery and buildings at West Pine Knot Colliery are in good condition, but heavier hoisting machinery will be needed before the colliery resumes operations.

At East Pine Knot Colliery the machinery is partially removed, it being probable that this colliery will not again be worked.

56. James Laing tract.

This tract contains principally the veins underlying the Mammoth. It will be worked from West Pine Knot Colliery, and will probably require no additional improvements.

57. Catharine Groh tract.

On this tract are located the improvements of the Richardson Colliery, which gets much of its coal from within its boundaries; and the west gangways from Thomaston Colliery will also take from it a part of their shipment. The coal is in good condition, and the improvements at Richardson Colliery are also good, but the coal in the Church or Holmes Vein is approaching exhaustion, and the property cannot do more than maintain its present revenue.

The property is greatly overweighted with debt, and as there is no likelihood that in any event its coal tonnage would pass over other railroads, and as this tract does not form an important connection between other parts of the Company's property, I advise Receivers to insist on a reduc-

tion of the encumbrances to \$300,000, and failing in this, to surrender the property.

58. *Reed,*

59. *Little Schall,*

60. *Hartman and Myer, and*

61. *Big Schall tracts.*

These lands being covered by one ownership, are treated together. The three first are in the western end of the Heckscherville Basin. There are no colliery openings on them, but the Glendower Colliery takes coal from them. It is probable that all the coal may be taken from this colliery, so that no further openings will be required. They contain no workable vein above the Holmes, but the Holmes and the lower veins are in good condition.

The Big Schall tract lies in the next basin to the southward, and is not now productive. The coal is probably good, but will be late in development, which diminishes the present valuation.

Taken as one body, these lands are estimated to be worth much more than the encumbrances; and of the separate tracts, the Big Schall is the only one that is not worth the remaining debt. As the property must probably be held or parted with in one body, I advise Receivers to keep it.

62. *Gunkel and Branham tract.*

There are no working collieries on this property, and those which were opened some years ago did not prove the veins in good condition. There are no collieries at all in this vicinity now, and there is no likelihood that any will be opened for some years to come.

The tract was originally well timbered, but most of it has been cut off since the Company held the land, and what remains is of little value.

On account of the doubtful character of the coal, and the delay in realizing revenue from the property, the computed valuation is but little more than half the debt; and, as it is entirely isolated from any other portion of the Company's property, and of so little intrinsic value, and as so little of the purchase money was paid, I advise Receivers to let the bondholders take possession of it.

63. *The Swatara lands.*

Contain no collieries in working order but Lower Rausch Creek and Lincoln. These are both in the hands of lessees, the leases expiring in January, 1884; they are both producing largely, and Lincoln Colliery is likely to continue to do so for some years. Lower Rausch Creek Colliery has reached a considerable depth, and it may prove difficult to continue the slope much further. This colliery works the Mammoth Vein, and Lincoln Colliery mines from the Lykens Valley Veins, which are here increased in number to four, with an aggregate thickness of thirty feet of workable coal; this being the greatest thickness that these veins are anywhere known to contain.

The west gangways of Middle Creek Shaft Colliery will, in time, penetrate this territory and increase its revenue.

Eckert Colliery is worked out at the present levels, the improvements have been removed and the mine flooded. It will not be opened again, but its coal will be taken to some other colliery. The future development of the property will be expensive, as the veins on much of the property lie deep.

64. *Francis Spaetzer tract.*

The western gangways of Lower Rausch Creek Colliery pass through this tract, but the Mammoth Vein is about exhausted, and the tract will be without revenue till the underlying veins are opened.

65. *John Myer tract*, and

66. *Henry Houtz tract*.

On this body of lands the East Franklin is the only working colliery. It works the Mammoth Vein, which is here much disturbed by faults. The colliery is in fair working order, but as it has never been able to make a large yield it has always been rather expensive. Another colliery will probably be needed on the underlying veins, the opening of which will require a shaft about 400 feet deep.

67. *Alexander Klinger tract*.

No collieries now take, or will take in the near future coal from this tract. When the workings of Colket Colliery shall reach the bottom of the basin, or when a tunnel shall be driven from the south dip across to the north dip, this tract will commence to have a revenue.

68. *Philip Kuntzleman tract*.

The remarks just made about the Alexander Klinger tract apply to this one. The late development brings down the valuation in both cases.

69. *Eckert, Forbes, and Delano lands*.

These lands have never yielded any coal except a little taken by the westward extension of the Eckert Colliery gangways. There is reason to believe that they contain good coal, but it cannot be largely worked for some years.

70. *Leonard Illig tract*, and

71. *Peter Levengood tract*.

These tracts lie within the limits of the Eckert, Forbes, and Delano lands, are in the same range as the Alexander Klinger and Philip Kuntzleman tracts, Nos. 67 and 68, and to them apply the same general remarks as were made concerning the two last named.

These properties, Nos. 64 to 71, were to a considerable extent bought from the same owners, and are covered by the same mortgage. They are valued at about five per cent. less than their cost, but about that much higher than the remaining encumbrances.

72. *Munson and Williams lands.*

The *East and West Brookside Collieries* are on this property. The former is abandoned for the present on account of some difficulties in mining the coal, the bottom slate heaving and making it very difficult to keep gangways and airways in repair, and very hard also to prepare the coal properly. The machinery has been removed, but the slope is in good condition, and the colliery will probably be reopened.

Schmoele's Broad Mountain Colliery was opened on the eastern end of the property on the Mammoth Vein, but the vein was in fault, and the place has been abandoned, and nothing remains but the slope.

West Brookside Colliery is the most valuable one owned by the Company. It shipped over four hundred thousand tons last year. Its product cost less per ton, and sold for much more than that of any other of the Company's collieries.

The property is very incompletely opened, and it is not likely to be developed fast enough to increase the revenue rapidly. The estate has been valued on the same basis of profit per ton as all the other property of the Company. While this rate of thirty cents per ton is high enough in the average, the Munson and Williams lands might fairly be credited with more. This would bring the valuation nearer the price paid, but it is already high enough to more than cover the remaining encumbrance.

73. *Joseph Keffer tract.*

This tract contains only the lower veins. They will be

worked through the eastern gangways of Lincoln Colliery, and will require no new openings within the limits of the tract.

74. *Fishing Creek lands.*

The *Kalmia Colliery* is the only one situated on this estate. It works the Lykens Valley Vein near its northern outcrop. The colliery is a profitable one to the lessees, though there is a good deal of irregularity and fault in the vein. The estate probably contains a basin of the Mammoth Vein, but it will be many years before it is opened so as to produce much coal. The computed value of the property is just equal to the encumbrance, which should, if possible, be reduced.

75. *Schuylkill and Susquehanna lands.*

This large property has only about one-quarter of its area within the coal measures. The developments which have been made are not such as to lead to an early opening of mines within its limits; the experiments of working collieries having resulted thus far in failure.

It has a large quantity of valuable timber, from which the estate derives most of its value. The property is without debt.

II. *Tracts which the Company controls through ownership of the stock.*

76. *Fulton lands.*

The *Excelsior* and *Enterprise Collieries*, both of which are in the hands of lessees, are the only working collieries on this property. They are both on the Mammoth Vein, which is in good condition, and the collieries will for some years to come ship on a large scale.

Margie Franklin and *Emory Collieries* have been abandoned for several years, the veins on which they were opened being faulty.

The eastern gangways of the *Greenback Colliery* will probably soon enter these lands on the westward.

77. *Locust Gap Improvement Company's lands.*

The *Monitor Colliery*, which is in the hands of lessees, is the only one on these lands; but the *Locust Gap* and *Locust Spring Collieries*, on the westward, and *Merriam Colliery*, on the eastward, will get a large part of their tonnage from them. There is a large amount of coal untouched on the southern part of the property, which will be opened from a slope on the next tract to the westward, so that no more openings will be required on this estate.

78. *Preston Coal and Improvement Company's lands.*

These lands contain *Preston Collieries* Nos. 1, 2, and 3. *Preston Colliery, No. 1*, is a red ash colliery. The slope was temporarily abandoned in 1877, the vein being in fault; but there is no reason to doubt that when this class of coal shall be required, the fault can be easily penetrated. The buildings and machinery are in fair order, but are not likely to be used soon again.

Preston No. 2 Colliery works the *Holmes*, *Mammoth*, and *Buck Mountain Veins*, all in good condition, though the *Holmes Vein* has a bad slate top, which falls among the coal, and makes it difficult to clean. The buildings and machinery are good, and the colliery is a moderately cheap one.

Preston No. 3 Colliery works only the *Mammoth Vein*, which is in fine condition. The colliery is in good order, and should work cheaply.

More than one-third of the area of this tract is outside the coal measures. This helps to lower the valuation, which

is only about two-thirds of the encumbrances ; but as the outstanding bonds are held by the Philadelphia and Reading Railroad Company, there can be no question of the propriety of retaining the lands.

79. *Mammoth Vein Coal and Iron Company's lands.*

This property contains the east shaft of Pottsville Shafts Colliery, which is sunk to the Primrose Vein. The geological structure here is extraordinarily disturbed, and much time and money have been expended in endeavoring to reach a locality where the veins are in their normal condition. It is hoped that this end is about being attained ; and if so, the colliery will be able to ship largely for many years. There will, however, be a new breaker needed, and additional machinery at the west shaft, before a large product can be reached. The low valuation is caused by the fact that the product of the Pottsville Shafts Colliery for the next twenty years will not come from this tract, but from the next property on the north.

The encumbrances on these lands are beyond the estimated value of the property, but as the debt is held by the Philadelphia and Reading Railroad Company, and as so much money has been expended in improvements, the lands should be retained.

80. *Delaware Coal Company's Lands.*

These lands contain the west shaft of the Pottsville Shafts Colliery. The remarks as to development and cost made about the Mammoth Vein Coal and Iron Company's lands, are applicable here.

81. *Tremont Coal Company's Estate.*

This estate contains the Middle Creek Shaft Colliery and the Colket Colliery.

The former colliery has thus far had an unsuccessful history, the veins being faulty. It is now standing full of water. Colket Colliery is working the Mammoth, Holmes, and Primrose Veins, all of which are in good coal. The buildings and machinery are good, and when the yield shall reach the full capacity of the colliery, it should be cheaply worked. There is a fire on the east side of the Mammoth Vein which has interfered with its production, but it is now probably under control.

West End Colliery is standing full of water. It will not again be opened until the time shall come to tunnel to the Lykens Valley Veins, which are in good condition. The buildings and machinery are in fair order, but the pumps have been removed.

Collieries on alien lands.

These collieries are Conner, Hammond, Girard, North Ashland, Gilberton, Furnace, Turkey Run, West Shenandoah, and Girard Mammoth, the first four being on lands belonging to the City of Philadelphia, the next four on the Gilbert lands, and the last on lands belonging to the Girard heirs. They all lie near the centre of the Mahanoy district.

Conner Colliery works the Buck Mountain Vein, which is here in fine condition. It is still working above water level, and will continue to do so for several years. It is therefore a cheap colliery, and the machinery and buildings, though old, do their work well.

Hammond Colliery works the Mammoth Vein at its first lift below water level, and the Holmes Vein, which are both good, though there is a good deal of refuse in the latter vein. The colliery is in good condition, and works cheaply.

Girard Colliery works the southern basin of the Mammoth Vein. This will continue to produce for three or four years,

but the principal supply for the future must come from the underlying veins.

There is a great deal of water to pump, but the colliery nevertheless works cheaply. The coal is fine, and the colliery generally is in good order.

North Ashland Colliery works the Mammoth Vein. It ships largely and works cheaply. The breaker is rather too small to handle the coal that the colliery can produce, so that the production is somewhat limited, except when the largest sizes of coal are in good demand. The Buck Mountain Vein is in unusually fine condition, and will when tunnelled to at the present level yield largely. The machinery and buildings are good.

All of these collieries are valuable property. The coal is choice and cheaply mined, and the royalty is moderate. The leases can no doubt be renewed on favorable terms, as the policy of the City of Philadelphia is to lease all the collieries on its lands to strong tenants.

Gilberton Colliery is not at present in producing condition. The Mammoth Vein at the present lift, which is the second below water level, has been entirely exhausted. A tunnel was driven to the first overlying vein—the Holmes—but it was found in bad condition, and it is doubtful whether any of the overlying veins at this level can be worked, because the mining on the Mammoth Vein has cracked the rocks above it. As the outcrops of the overlying veins are in the swamp bordering an Mahanoy Creek, any attempt to work them will greatly increase the quantity of water to be pumped, which is now very large. A tunnel to the Buck Mountain Vein has cut it where it is in fault, but this may be merely a local disturbance.

From present appearances this colliery will not again be profitable till a new lift is sunk on the Mammoth Vein,

which would take a year, and would require heavier hoisting and pumping machinery. The breaker is good. There is a yearly royalty charge of \$18,000 on this property, whether any coal is shipped or not, which, in its present unproductive condition, is an added weight to be carried. On the whole, the colliery is likely to be unprofitable, and the lease should be surrendered if it can be given up without parting with the other collieries on these lands.

Furnace Colliery works the Buck Mountain Vein, which yields here a rough coal that does not sell freely. It will last but two or three years longer, as the Gilberton Colliery will take the coal from the lower levels of this vein. The breaker is a poor one, but will work out the tributary coal. The colliery runs cheaply, but the coal is not a choice one. Its shipments are small, and will so continue.

Turkey Run Colliery is a good colliery, working the Mammoth Vein. The coal is good, and the colliery is a cheap one with a large production, and will need no further expenditure for sinking for some years. The buildings and machinery are good.

West Shenandoah Colliery works the Buck Mountain, Seven Feet, and Mammoth Veins. It produces cheaply, the buildings and machinery are good, and there will be no further cost for improvements, except for pumping machinery, in the near future. The coal is good, and the production is large.

Taken all together these leases on the Gilbert lands are valuable to the Company, the royalties are moderate, and the coals good and cheaply mined, except at Gilberton. If the leases must all be held, or all given up, they should be held, but Gilberton by itself is an undesirable possession.

Girard Mammoth Colliery works the Buck Mountain Vein, which is in good condition. At the present level

there is but a small daily product possible, and the level will not last more than a year or two without sinking. There is, however, on the western end of the tract, a good deal of Buck Mountain Vein and Mammoth Vein coal remaining. It will require considerable time and money to develop these veins and to repair the breaker, but when this is done, the colliery should work cheaply for several years. It is doubtful, however, whether the coal remaining will justify the cost of the improvements, unless the Cuyler Colliery, adjoining, should be worked with it, in which case the lease should be valuable. An agreement has been made with the landowners by which, at the expiration of the present lease, about four years hence, the Cuyler Colliery will come into the Company's possession.

On the whole, taking into consideration the royalties paid, the collieries on the city lands produced coal in the year 1879 at a cost slightly in excess of the average cost of all the Company's coal, and the coal from those on the Gilbert lands cost about five cents above the average, so that the gain to the Company from these leased collieries, was that their own coal was, to the extent of the production of these collieries, 767,305 tons, left in the ground, and that this tonnage was kept out of the hands of rival mining and transporting companies. However, as the Lehigh Valley Railroad interest, which is the only one likely to compete for the possession of these collieries, had all the coal that it could sell, it is doubtful whether this policy worked to the injury of that interest last year.

The Girard Mammoth Colliery came into the Company's possession this year, so that its production and cost of coal are not included in last year's statements.

Locust Run Colliery was one of the Company's collieries on alien lands, and the cost of the improvements appears with those of the other collieries; but the lease has expired,

and the improvements have been exchanged with the landholders for a corresponding value of colliery equipments. These equipments will appear in the appraisers' estimate of personal property, and therefore I have placed no value on the improvements at Locust Run Colliery.

To sum up the recommendations of this part of my report, I advise Receivers to make the following changes in the Company's estate. In doing this I shall of course make no suggestions as to the exact course to be followed to secure these modifications. I consider them very desirable, but the steps to be taken do not fall within the province of this report:

I. Surrender to the bondholders the tract named in Statement I, unless the modifications proposed in the detailed reports shall be accepted by them.

Statement I.—Tracts which should be surrendered, unless the bondholders will consent to better terms.

No.	Tract Name.	Valuation.	Cost.	Cash paid.	Encumbrances.	Coal product tons.
13...	Helfenstein.....	\$383,516	\$654,000 00	\$31,000 00	\$623,000	12,044,000
24...	Tamaqua.....	1,388,797	2,234,042 31	138,042 31	2,096,000	68,110,000
25...	Coal Hill.....	39,973	69,158 75	158 75	69,000	1,194,000
27...	Valley Furnace.....	837,550	1,298,085 99	3,085 99	1,295,000	53,978,000
43...	Diamond.....	21,050	26,870 94	870 94	26,000	2,425,000
44...	Minersville.....	111,096	134,529 72	1,470 28	136,000	12,490,000
48...	Salem Coal Company...	82,047	150,000 00	.....	150,000	36,612,000
57...	Catharine Groh.....	327,604	475,000 00	20,000 00	455,000	4,464,000
62...	Gunkel & Branham.....	86 862	163,479 37	479 37	165,000	25,350,000
		\$3,278,495	\$5,207,167 08	\$192,167 08	\$5,015,000	216,667,000

II. Make special efforts to obtain better terms in the cases mentioned below, being cases where the encumbrances nearly

or quite equal the valuation, but where it is not desirable to part with the property :

No. 12. Mount Carmel Locust Mountain Tract.

No. 42. St. Clair Tract.

Nos. 64 to 71. Eckert, Forbes, and Delano lands, and the lands connected therewith.

No. 74. Fishing Creek lands.

III. Insist on a reduction of the interest on the purchase money mortgages in all cases to as low a rate as six per cent. If this can be done in no other way, the present bonds may be paid off, and other bonds bearing six per cent. interest substituted as fast as the Company's improved financial condition shall make such a change possible.

If all the property named in Statement I,—the incumbrances on which amount to \$5,015,000,—should be surrendered to the bondholders, the Company would lose only the small amount paid on account of the purchase money, amounting to \$192,167.08, which is about as much as seven months interest, and the annual saving of interest would amount to over \$350,000. The money already paid for interest and taxes is gone, whether the property be retained or surrendered.

As these lands are, except the Catharine Groh tract, entirely undeveloped, they cannot, if they should at once fall into the hands of rival companies, produce much coal for several years. Meanwhile the Company could be developing other parts of the estate, and could increase the product from the lands that would remain, as rapidly as it can be increased from the whole estate, the limit being in the demand, and not in the possibility of production. It will be many years before the estate, as diminished, can be brought up to its full productive capacity, and in those years there will, no doubt, be

other opportunities of buying coal lands. The proposed surrender of property would diminish the Company's interest in the estate nineteen per cent., and its indebtedness to parties other than the Railroad Company, thirty-eight per cent. It is not, however, likely that the whole of either of these reductions will be made, as some of the owners will doubtless prefer to make better terms for the Company, rather than take back their lands. Should, however, the whole or any part of the tracts named in Statement I be surrendered, a recomputation would show that the increased production of the remainder of the estate would so increase the revenue, that what would remain would be nearly as valuable as the whole now is.

But little weight should be given to the fear that rivals will possess the surrendered property. Most of it is not a tempting investment. If individuals develop it, the Philadelphia and Reading Railroad has a better chance than any other road to take the tonnage. But I will go further, and say that I think the policy of attempting to monopolize anthracite is a mistaken one. It was a necessary and, therefore, a wise step, that was taken by the Company when it bought coal lands to secure tonnage for the railroad, but when this policy is pushed much further, and the attempt is made to buy up all lands that might serve a rival interest, it does not prevent that interest from mining and selling coal, but simply drives it away from the Schuylkill Region, in whose general prosperity the Company is interested, and so aids in the development of some other region which is in no way tributary to the Company's interest. Twenty or thirty years hence there may be some opportunity to monopolize anthracite lands, but the present policy should be to surrender the lands in question, and having retained coal enough to last for one hundred years, trust to future opportunities to acquire what may hereafter be needed.

As to the question of the best manner of working the

property in the future, I advise that the Company continue to mine its own coal. It might succeed in leasing a number of the best and cheapest collieries; but there are many for which no responsible tenant can be found, and these the Company would have to work at a loss. None of the collieries, except a few of the best, would prove steadily remunerative to the lessees, and they would mostly be thrown, one by one, on the Company's hands, in the same wretched condition as they were when the Company first acquired them. Mining in the Schuylkill region, in most cases, has become too expensive for individual operators, and ten years of a policy of leasing would again find Schuylkill coal discredited by its bad preparation, collieries ruined, the labor question again a threatening one (for the same causes would bring the same results), the market passed into the hands of rivals, and generally the work that has cost so much time, money, and some valuable lives to accomplish, all to be begun again.

The Company's mines are now, and have been for five years, worked more intelligently and more economically than they could be under a system of leases; and I think that a resumption of that system would be a long step backward, and no wiser than it would have been, two years ago, when the country had incurred all the cost of getting back to specie payments, to return again to the inflated currency that had worked so much mischief.

A continuance of the present system of mining, with the use of all the economy that is possible and wise, conservative action in harmony with other interests to keep selling prices at a remunerative point, and an inflexible refraining from attempts to push coal into the market faster than responsible buyers at full prices can be found for it, are the elements of a policy that will (in the words of your instructions as to the questions on which I should report) "produce the greatest

revenue consistent with the future safety and productiveness of the property."

I may be permitted, in closing to say that in all the investigations which have formed the basis of this report, I have had the heartiest co-operation and assistance from all the officers of the Company with whom I have come in contact, and that their help has greatly aided me in my work.

Yours, respectfully,

JOSEPH S. HARRIS.

POTTSVILLE, PA., July 31, 1880.

APPENDIX.

C.—Statement showing the shipments of Anthracite in Pennsylvania, with the demand and the rate of growth of demand.

NOTE:—All statements of tonnage are in thousands of tons.

Years.	TOTAL ANTHRACITE FIELD.					SCHUYLKILL REGION.					LEHIGH REGION.					WYOMING REGION.					Years.
	Annual shipments.	Ratio of change in shipment.	Five Year.		Ratio of change in demand.	Annual shipments.	Aggregates.	Means de-mand.	Ratio of change in demand.	Annual shipments.	Aggregates.	Means de-mand.	Ratio of change in demand.	Annual shipments.	Aggregates.	Means de-mand.	Ratio of change in demand.				
1832	363	.....	.....	.....	.....	209	.....	.....	.....	70	.....	.....	.....	84	.....	.....	.....	1832			
1833	488	+34	.....	.....	.....	253	.....	.....	.....	123	.....	.....	.....	112	.....	.....	.....	1833			
1834	377	-23	2,473	495	.....	227	1,461	292	.....	106	578	116	.....	44	434	87	.....	1834			
1835	561	+49	2,979	596	+20	340	1,782	356	+22	131	732	146	+26	90	465	93	+07	1835			
1836	684	+22	3,230	646	+08	432	1,976	395	+11	148	823	165	+13	104	431	86	-07	1836			
1837	869	+27	3,671	734	+14	530	2,224	445	+13	224	938	188	+14	115	509	102	+19	1837			
1838	739	-15	3,974	795	+08	447	2,375	475	+07	214	1,032	206	+10	78	567	113	+11	1838			
1839	818	+11	4,250	850	+07	475	2,567	513	+08	221	1,027	205	+00	122	655	131	+16	1839			
1840	864	+06	4,489	898	+06	491	2,620	524	+02	225	1,076	215	+05	148	793	159	+21	1840			
1841	960	+11	5,014	1,003	+12	624	2,883	577	+10	143	1,130	226	+05	192	1,001	200	+26	1841			
1842	1,108	+15	5,827	1,165	+16	583	3,296	659	+14	273	1,286	257	+14	253	1,245	249	+24	1842			
1843	1,264	+14	6,976	1,395	+20	710	3,937	787	+19	268	1,490	298	+16	286	1,549	310	+24	1843			
1844	1,631	+29	8,360	1,672	+20	888	4,621	924	+17	377	1,864	373	+25	366	1,875	375	+21	1844			
1845	2,013	+23	10,134	2,027	+21	1,132	5,704	1,141	+23	429	2,225	445	+19	452	2,205	441	+18	1845			
1846	2,344	+16	11,959	2,392	+18	1,308	6,728	1,345	+18	517	2,627	525	+18	518	2,604	521	+18	1846			
1847	2,882	+23	13,571	2,714	+13	1,666	7,568	1,514	+13	634	3,032	606	+15	583	2,971	594	+14	1847			
1848	3,089	+07	14,917	2,983	+10	1,734	8,277	1,655	+09	670	3,293	659	+09	685	3,347	669	+13	1848			
1849	3,243	+05	17,022	3,404	+14	1,728	9,298	1,859	+12	782	3,740	748	+13	733	3,985	797	+19	1849			
1850	3,359	+04	19,133	3,827	+12	1,841	10,269	2,054	+10	690	4,178	836	+12	828	4,686	937	+18	1850			
1851	4,449	+32	21,239	4,248	+11	2,329	11,200	2,240	+09	964	4,562	912	+09	1,156	5,477	1,095	+17	1851			
1852	4,993	+12	23,998	4,799	+13	2,637	12,664	2,533	+13	1,072	4,987	997	+09	1,284	6,347	1,269	+16	1852			
1853	5,195	+04	27,248	5,449	+13	2,665	14,376	2,875	+13	1,054	5,581	1,116	+12	1,476	7,291	1,458	+15	1853			
1854	6,002	+15	29,727	5,945	+09	3,192	15,650	3,130	+09	1,207	5,969	1,194	+07	1,603	8,108	1,622	+11	1854			
1855	6,609	+10	31,379	6,276	+06	3,553	16,387	3,277	+05	1,284	6,216	1,243	+04	1,772	8,777	1,755	+08	1855			
1856	6,928	+05	33,023	6,605	+05	3,603	16,995	3,399	+04	1,352	6,542	1,308	+05	1,973	9,487	1,897	+08	1856			
1857	6,645	-04	34,829	6,966	+05	3,374	17,252	3,450	+01	1,319	6,963	1,393	+06	1,953	10,615	2,123	+12	1857			
1858	6,839	+03	36,733	7,347	+05	3,273	17,449	3,490	+01	1,380	7,501	1,500	+08	2,186	11,785	2,357	+11	1858			
1859	7,808	+14	37,759	7,552	+03	3,449	17,007	3,401	-03	1,628	7,887	1,577	+05	2,731	12,867	2,573	+09	1859			
1860	8,513	+09	38,983	7,797	+03	3,750	17,006	3,401	+00	1,822	7,919	1,584	+00	2,942	14,060	2,812	+09	1860			
1861	7,954	-07	41,710	8,342	+07	3,161	17,645	3,529	+04	1,738	8,434	1,687	+06	3,055	15,634	3,127	+11	1861			
1862	7,869	-01	44,079	8,816	+06	3,373	18,358	3,672	+04	1,351	8,861	1,772	+05	3,146	16,864	3,373	+08	1862			
1863	9,566	+22	45,218	9,044	+03	3,912	18,965	3,793	+03	1,895	9,080	1,816	+02	3,760	17,177	3,435	+02	1863			
1864	10,177	+06	49,968	9,994	+10	4,162	21,592	4,318	+14	2,055	9,521	1,904	+05	3,961	18,859	3,772	+10	1864			
1865	9,652	-05	55,088	11,018	+10	4,357	23,381	4,676	+08	2,041	10,672	2,134	+12	3,255	21,038	4,208	+12	1865			
1866	12,704	+32	59,323	11,865	+08	5,788	24,800	4,960	+06	2,179	11,280	2,256	+06	4,737	23,246	4,649	+10	1866			
1867	12,989	+02	63,032	12,606	+06	5,162	26,413	5,283	+06	2,502	11,175	2,235	-01	5,325	25,426	5,085	+09	1867			
1868	13,801	+06	69,562	13,912	+10	5,331	27,024	5,405	+02	2,503	12,373	2,475	+11	5,968	30,146	6,029	+19	1868			
1869	13,886	+01	72,567	14,513	+04	5,775	27,789	5,558	+03	1,950	12,430	2,486	+00	6,141	32,329	6,466	+07	1869			
1870	16,182	+16	79,248	15,849	+09	4,968	29,322	5,864	+05	3,239	13,801	2,760	+11	7,975	36,106	7,221	+12	1870			
1871	15,709	-03	86,710	17,342	+09	6,553	31,204	6,241	+06	2,236	15,004	3,001	+09	6,920	40,483	8,097	+12	1871			
1872	19,670	+25	93,003	18,601	+07	6,695	32,296	6,459	+03	3,873	16,828	3,366	+12	9,102	43,880	8,776	+08	1872			
1873	21,263	+08	96,546	19,309	+04	7,213	33,610	6,722	+04	3,706	16,424	3,285	-02	10,345	46,514	9,303	+06	1873			
1874	20,179	-05	99,373	19,875	+03	6,867	33,279	6,656	-01	3,774	18,043	3,609	+01	9,538	48,053	9,611	+03	1874			
1875	19,725	-02	100,551	20,110	+01	6,282	34,779	6,956	+04	2,835	18,503	3,701	+02	10,609	47,271	9,454	+02	1875			
1876	18,536	-06	96,893	19,379	-04	6,222	33,848	6,770	-03	3,855	18,034	3,607	-02	8,459	45,012	9,002	-05	1876			
1877	20,848	+12	102,857	20,571	+06	8,195	35,941	7,188	+06	3,433	18,586	3,771	+04	8,320	48,060	9,612	+07	1877			
1878	17,605	-16	106,932	21,386	+04	6,282	37,459	7,492	+04	3,237	20,271	4,054	+07	8,086	49,201	9,840	+02	1878			
1879	26,143	+48	113,196	22,639	+06	8,960	39,537	7,907	+05	4,596	20,766	4,153	+02	12,586	52,892	10,578	+07	1879			
1880	23,800	-09	118,148	23,630	+04	7,800	39,942	7,988	+01	4,250	20,783	4,157	+00	11,750	57,422	11,484	+09	1880			
1881	24,800	+04	.....	.....	.....	8,300	.....	.....	.....	4,350	.....	.....	.....	12,150	.....	.....	.....	1881			
1882	25,800	+04	.....	.....	.....	8,600	.....	.....	.....	4,350	.....	.....	.....	12,850	.....	.....	.....	1882			

JOSEPH S. HARRIS.

D.
Diagram to illustrate the Rate of Increase of the Demand for Anthracite
in the United States.

Scales of Increase: Horizontal Scale, Base = 10 Inches; Vertical Scale, 1 per Cent. = 2/10 Inch.

I.—TRACTS IN WHICH THE COMPANY HAS AN UNDIVIDED OWNERSHIP OF THE LANDS.

ESTIMATE OF THE COAL PRODUCT OF THE ESTATE.											Present Annual		Progressive Development		DATE OF		VALUE OF COMPANY'S ESTATE.					VALUE OF COMPANY'S INTEREST IN ESTATE.					Econm- brancea.		REMARKS.						
No.	NAME OF TRACT.	ALL VEINS.		MAMMOTH And Lower Veins.		LOWER VEINS ONLY		WITHOUT COAL.	TOTAL AREA.	TOTAL PRODUCT.	Product.		No.	Date.	Annual Yield.	Annual Revenue.	Exhaus- tion.	Maturity of Staking Fund.	Coal.	Timber.	Surface.	Total.	Per Acres.	No.	Acres.	Coal Tonnage.	Coal.	Timber.		Surface.	Total.	Per Acres.	Econm- brancea.		
		Acres.	Tons per Acres.	Acres.	Tons per Acres.	Acres.	Tons per Acres.				TONNAGE.	REVENUE.																						Coal.	Timber.
1	Trevorton Estate			1,024	17,000	1,296	9,000	1,712	4,032	29,072,000	72,785	\$21,836	1	1855	600,000	\$180,000	1941	1935	\$1,041,725				\$1,041,725	\$258	1	2,016	14,536,000	\$520,863			\$520,863	\$258			
2	Associate Lands			1,824	17,000	484	9,000	1,087	3,345	35,364,000			2	1900	500,000	150,000	1970	1961	502,651	\$153,075			655,726	196	2	2,376	25,110,541	357,040			357,040				
3	Shamokin & Bear Valley			1,212	18,000		6,000	318	2,094	25,200,000	101,837	30,551	3	1890	450,000	135,000	1944	1938	1,198,030	3,642			1,196,672	571	3	1,974	23,755,874	1,124,662			1,124,662	571			
4	M. E. Levenson			391	18,000				391	7,038,000			4	1895	100,000	30,000	1965	1956	147,674	9,775	\$1,000		158,440	405	4	391	7,038,000	147,674			147,674	405			
5	W. M. Rockefeller			68	17,000		6,000		106	1,384,000	14,604	4,381	5	1880	14,604	4,381	1975	1966	70,985				70,985	670	5	106	1,384,000	70,985			70,985	670			
6	Big Mountain			992	18,000		8,000	3,061	4,905	17,156,000	188,212	56,464	6	1885	400,000	120,000	1925	1925	1,440,887	2,425			1,442,812	294	6	4,905	17,156,000	1,440,887			1,440,887	294			
7	Brady, Gray & Wetherill			627	19,000		220	5,000	847	13,013,000	57,348	17,204	7	1890	150,000	45,000	1973	1964	486,284		2,000		488,284	576	7	847	13,013,000	486,284			488,284	576			
8	Melntyre			1,060	13,000		589	5,000	1,640	16,725,000	39,341	11,802	8	1890	300,000	90,000	1944	1938	1,675,000				1,675,000	440	8	1,049	16,725,000	1,675,000			1,675,000	440			
9	William Sheed			177	13,000				177	2,301,000			9	1905	80,000	0,000	1982	1962	20,278				20,455	116	9	177	2,301,000	20,278			20,278	116			
10	Samuel Morgan			34	13,000				34	442,000			10	1905	5,000	1,500	1993	1970	3,446				3,480	102	10	34	442,000	3,446			3,446	102			
11	Mt. Carmel Coal & Iron Co.			1,020	14,000		226	6,000	2,542	15,600,000	129,037	38,711	11	1895	400,000	120,000	1929	1929	923,786	4,294	4,000		932,080	367	11	2,542	15,600,000	923,786			923,786	367			
12	Mt. Carmel Locust Mountain			132	12,000		382	6,000	514	3,876,000	34,515		12	1880	75,000	22,500	1932	1927	383,288		514	2,500	330,302	654	12	514	3,876,000	383,288			383,288	654			
13	Helfenstein			356	17,000		856	7,000	816	2,027	12,041,000	50,664	15,199	13	1905	300,000	90,000	1941	1935	373,831		10,135		383,516	189	13	2,027	12,041,000	373,831			383,516	189		
14	Locust Mt. Summit Imp't. Co.			447	18,000		188	6,000	635	9,174,000	26,003	7,801	14	1890	125,000	37,500	1961	1953	341,103				341,103	637	14	635	9,174,000	341,103			341,103	637			
15	Locust Dale			563	20,000		413	4,000	2,202	12,912,000	129,018	38,705	15	1890	200,000	60,000	1948	1941	763,491		2,582	5,000	761,073	633	15	1,202	12,912,000	763,491			761,073	633			
16	Ashtland Estate			1,502	20,000		760	6,000	2,322	35,800,000	188,303	56,491	16	1890	500,000	150,000	1957	1949	1,571,379		1,000	20,000	1,562,379	686	16	2,322	35,800,000	1,571,379			1,562,379	686			
17	Fountain Spring								52				17										4,200	81	17	52					4,200	81			
18	Necho Allen								155				18										3,100	20	18	155					3,100	20			
19	Locust Mountain			32	15,000		159	6,000	216	4,434,000	21,528	7,358	19	1880	24,528	7,358	1938	1932	111,495				111,495	274	19	407	1,434,000	111,495			111,495	274			
20	William Jones			102	20,000		303	8,000	24	5,664,000	213,046	63,914	20	1885	150,000	45,000	1916	1916	694,691			0,000	703,691	1,439	20	489	5,664,000	694,691			694,691	1,439			
21	Philadelphia & Mahanoy			1,549	24,000		996	8,000	183	2,728	45,144,000	738,484	221,545	21	1900	500,000	150,000	1961	1953	3,167,477		400	22,000	3,189,877	1,169	21	2,728	45,144,000	3,167,477			3,189,877	1,169		
22	James McNeal			388	21,000		181	13,000		10,501,000	166,903	50,071	22	1900	100,000	30,000	1951	1944	688,493				686,493	1,206	22	629	10,501,000	688,493			686,493	1,206			
23	Kear & Patterson			164	16,000		216	10,000	1,093	4,784,000	14,138	4,241	23	1890	100,000	30,000	1936	1930	232,846		1,000	2,500	236,346	760	23	1,473	4,784,000	232,846			236,346	760			
24	Tamaqua Lands			1,670	30,000		810	17,000		68,110,000	10,570	3,171	24	1885	200,000	60,000									24										
25	Coal Hill			48	13,000		114	5,000	541	1,194,000			25	1895	500,000	150,000	2024	1995	1,377,911		8,386	2,500	1,388,797	331	25	4,103	68,110,000	1,377,911			1,388,797	331			
26	Wood & Abbot			400	26,000		117	13,000		11,961,000			26	1905	150,000	45,000	1935	1930	38,507		1,406		39,973	57	26	525	11,961,000	38,507			39,973	57			
27	Valley Furnace			1,316	28,000		558	15,000	1,752	53,978,000			27	1890	150,000	45,000	1985	1964	102,069				102,069	194	27	525	11,961,000	102,069			102,069	194			
28	Glenworth			136	28,000		170	15,000		6,468,000	10,583	3,175	28	1905	600,000	150,000	1978	1968	831,550			2,000	837,550	114	28	7,350	53,978,000	831,550			837,550	114			
29	Eagle Hill			130	28,000		181	15,000		5,925,000	21,166	6,350	29	1890	75,000	22,500	1975	1965	195,168				195,168	595	29	328	6,468,000	195,168			195,168	595			
30	Mary Patterson			44	15,000		6	5,000		690,000	3,175		30	1880	100,000	30,000	1947	1940	263,613		650		264,263	813	30	328	5,925,000	263,613			264,263	813			
31	Lewis Tract			107	25,000		30	15,000		3,125,000	20,000	6,000	31	1890	20,000	6,000	2036	1989	99,231			1,500	100,731	984	31	50	690,000	99,231			99,231	984			
32	Ravensdale			123	25,000		6	15,000		3,225,000	15,085	4,705	32	1890	40,000	12,000	1966	1957	129,059		150	1,500	130,709	927	32	141	3,225,000	129,059			130,709	927			
33	Dilecamp			48	25,000		28	15,000		1,629,000			33	1895	10,000	3,000									33										
34	Lee Lands			104	15,000		1,188	5,000	670	1,912	7,250,000	57,850	17,358	34	1930	15,000	4,500	2015	1988	16,106				16,106	212	34	76	1,620,000	16,106			16,106	212		
35	Rep Tracts			500	25,000				500	12,500,000			35	1910	30,000	9,000			321,625		1,912	5,000	328,537	172	35	1,434	4,437,500	328,537			328,537	172			
36													36	1930	150,000	45,000	2009	1983	25,998			6,000	31,998	61	36	250	6,250,000	25,998			25,998	61			
37	Saw Mill			10	15,000		90	5,000		600,000	15,685	4,705	37	1880	15,685	4,705	1918	1918	65,680				65,680	667	37	50	300,000	65,680			65,680	667			
38	Oak Hill			181	15,000		21	5,000		6,720,000	26,566	7,970	38	1905	60,000	18,000	1958	1950	127,131		600	2,500	130,231	364	38	358	6,720,000	127,131			130,231	364			
39	Ellmaker			94	25,000		91	5,000		2,805,000	43,358	13,007	39	1880	43,358	13,007	1945	1938	201,344				201,344	1,088	39	139	2,107,541	201,344			201,344	1,088			
40	Flowers Field			20	25,000		180	5,000		1,400,000	20,858	6,257	40	1880	20,858	6,257	1947	1940	97,334			1,500	98,834	404	40	59	413,000	97,334			97,334	404			
41	West Flowers Field			13	15,000				117	2,795,000	46,578	13,973	41	1880	46,578	13,973	1910	1934	213,373		75	2,500	215,948	1,846	41	69	2,460,555	213,373			213,373	1,846			
42	St. Clair			110	15,000		467	5,000		6,885,000	68,623	20,587	42	1880	68,623	20,587	1973	1964	334,282		800	2,000	336,282	500	42	673	6,885,000	334,282			336,282	500			
43	St. Clair			156	25,000		257	5,000</																											

II.—TRACTS WHICH THE COMPANY CONTROLS THROUGH OWNERSHIP OF STOCK.

76	Fulton Coal Co.		848	13,000	1,144	5,000	176	1,068	10,244,000	98,350	\$29,505	78	1895	200,000	\$60,000	1933	1933	\$583,038				\$583,038	\$350	78	1,472	9,040,269	\$514,527		\$514,527	\$350
77	Lucust Gap Impt. Co.		356	18,000	521		1,011	1,988	10,410,000	152,776	45,883	77	1895	152,776	45,883	1948	1941	717,668	\$7,077			724,745	365	77	1,674	8,765,765	604,314		910,273	365
77	Preston Coal & Impt. Co.		868	20,000	625		853	2,346	21,110,000	108,340	32,502	77	1895	200,000	60,000	1987	1966	832,837	2,000	\$5,000		839,837	858	78	1,215	19,321,223	786,332		792,341	358
78	Mammoth Vein C. & I. Co.	1,681	26,000					1,031	26,506,000	22,000	6,609	78	1905	300,000	90,000	1902	1970	290,803		6,000		305,803	297	79	846	21,096,000	246,007		250,330	247
80	Delaware Coal Co.	1,268	26,000					1,268	32,368,000	20,000	6,000	80	1900	500,000	90,000	2013	1988	297,759	6,310	8,000		312,069	216	79	1,218	32,368,000	297,759	6,310	312,069	216
81	Tremont Coal Co.	898	25,000					1,052	61,850,000	76,129	22,839	81	1930	600,000	120,000	2011	1985	734,984	13,500	2,600		750,084	167	80	4,438	60,997,844	724,858	13,314	740,698	167
	TOTAL OF II.....	3,197	3,482	3,030			3,062	12,801	163,388,000	477,595	\$143,279							\$3,468,089	\$28,917	\$21,500		\$3,516,506			11,918	158,699,101	\$3,173,797	\$27,501	\$3,221,408	\$1,800,000
	TOTAL OF I. & II.....	18,269	26,253	46,007			69,417	160,566	1,208,254,000	4,015,288	\$1,204,583							\$31,803,902	\$913,672	\$177,325		\$32,901,599		154,177	1,141,685,853	\$29,603,041	\$861,326	\$30,630,048	\$14,716,058

3 9088 00026 3665

SMITHSONIAN INSTITUTION LIBRARIES